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Paper Awards For Government Printing Office

Joint Congressional Committee on Printing Makes Awards on Thursday of Last Week on Bids Opened August 20 for Supplies of Paper for the Six Months Beginning October 1, 1934—Awards in Numerous Instances Are Divided into Three Months' Periods At Slightly Higher Prices for the Latter—The Successful Bidders

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 30, 1934.—The Joint Congressional Committee on Printing met today and announced the following awards for paper for the Government Printing Office for the term of six months, beginning October 1. These bids were opened August 20.

News Print

No. 1—1,500,000 lbs., 24x36—64; rolls 24, 36, and 48 ins. wide (3-inch fiber cores, with metal ends) all bids rejected.

Machine-Finish Book

No. 3—400,000 lbs., 25x38—70; flat, cut 24x32, 28x38, and 31¼x45½ ins. I. W. Butler Paper Co., last quarter 1934, 5.45 cents; last quarter 1935, 5.73 cents.

No. 4—400,000 lbs., 25x38—70; flat, cut 24x38 and 38x48 ins. Byrant Paper Co., first quarter 1934, 5.48 cents; first quarter 1935, 5.73 cents.

No. 5—400,000 lbs., 25x38—70; flat, cut 24x38 and 38x48 ins. Barton, Duer & Koch Paper Co., first quarter 1934, 5.48 cents; last quarter 1935, 5.73 cents.

No. 6—250,000 lbs., 25x38—70; rolls, 18, 21, 23, and 28½ ins. wide (3-inch iron cores). Barton, Duer & Koch Paper Co., last quarter 1934, 4.93 cents; first quarter 1935, 5.18 cents.

No. 7—500,000 lbs., 25x38—70; rolls, 19 and 38 ins. wide (3-inch iron cores). Perkins, Goodwin Co., last quarter 1934, 4.93 cents; last quarter 1935, 5.18 cents.

No. 8—500,000 lbs., 25x58—70; rolls, 19 and 38 ins. wide (3-inch iron cores). Dobler & Mudge, last quarter 1934, 4.93 cents; first quarter 1935, 5.18 cents.

No. 9—250,000 lbs., 25x38—70; rolls, 24, 36, and 48 ins. wide (3-inch iron cores). R. P. Andrews Paper Co., last quarter 1934, 4.93 cents; first quarter 1935, 5.18 cents.

No. 10—150,000 lbs., 25x38—80; rolls, 32 ins. wide (3-inch iron cores). (Note—The paper specified in this lot shall be suitable for writing on with ink.) Dobler & Mudge, last quarter 1934, 4.98 cents; first quarter 1935, 5.253 cents.

No. 11—400,000 lbs., 25x38—80; flat, cut 24x38, 33¾x64, and 38x48 ins. Whitaker Paper Co., last quarter 1934, 5.24 cents; first quarter 1935, 5.49 cents.

No. 12—250,000 lbs., 25x38—100; flat, cut 22¼x32¼, 24x38, 24½x36¼, 32x42, 38x48, and 41x52 ins. Whitaker Paper Co., last quarter 1934, 5.00 cents; first quarter 1935, 5.25 cents.

No. 13—5,000 lbs., 25x38—120 and 140; flat, cut 29x41 and 38x48 ins. Min. order 5,000 lbs. Whitaker Paper Co., last quarter 1934, 5.00 cents; first quarter 1935, 5.25 cents.

No. 14—15,000 lbs., blue and salmon, 25x38—70 and 100; flat, cut 25x38 and 38x48 ins. Min. order, one color, 5,000 lbs. Aetna Paper Co., last quarter 1934, 70 lb. 6.28 cents; 100 lb. 5.80 cents; first quarter 1935, 70 lb. 5.53 cents; 100 lb. 6.05 cents.

Machine-Finish Book End-Paper

No. 15—40,000 lbs., flat, 25x38—160; the grain to run the 38-inch way. R. P. Andrews Paper Co., last quarter 1934, 5.50 cents; first quarter 1935, 5.75 cents.

Offset Book

No. 16—80,000 lbs., 25x38—120; flat, cut 24x38 and 26x32 ins.; grain as ordered. Min. order 5,000 lbs. Old Dominion Paper Co., last quarter 1934, 5.72 cents; first quarter 1935, 5.97 cents.

Antique Book

No. 17—60,000 lbs., 25x38—100; flat, cut 25x38 and 38x50 ins. Oxford Miami Paper Co., last quarter 1934, 6.53 cents; 100 lb. 6.05 cnets.

Lightweight Machine-Finish Book

No. 18—70,000 lbs., 25x38—60; flat, cut 32x48 and 38x48 ins. Oxford Miami Paper Co., last quarter 1934, 5.96 cents; first quarter 1935, 6.21 cents.

50 Per Cent Rag Lightweight High Machine-Finish Book

No. 19—40,000 lbs., 25x38—60; flat, cut 32x48 and 38x48 ins. Dill & Collins, Inc., last quarter 1934, 11.52 cents; first quarter 1935, 11.77 cents.

(Continued on page 19)

Dells Paper & Pulp Co. Sold to Sterling

Eau Claire, Wis. Mill Transferred to New Owners September 1—Production Will be Greatly Expanded In Near Future and Plant May Operate At Capacity Shortly—Transaction Only Involves Mill and Does Not Include Timber Holdings

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 4, 1934—In a deal consummated at Milwaukee, Wis., last week, the Dells Paper and Pulp Company, of Eau Claire, Wis., was sold to the Sterling Industries, Inc., of Florida, according to announcement of Stephen R. Davis, president of the former. Transfer of the mill to the new company was to take place September 1.

Mr. Davis stated that the new owners of the mill control a large amount of tonnage in addition to that supplied by the Dells company for many years past, and probably will be in a position to operate the mill at capacity. Operations are to be greatly expanded in the near future.

Pending the setting up of a new mill organization, the Dells plant was closed down September 1. A meeting was to be held in Eau Claire this week to organize a new operating company, and for the election of directors and officers. It was believed operations would be suspended for only a few days. Mr. Davis was unable to state whether any of the present Dells officials would continue with the new company.

Most of the stock acquired by the new owners was purchased from the W. L. Davis and D. R. Davis families. The transaction involves only the mill at Eau Claire, and does not include timber and other holdings of the Dells company.

Sales of the Dells mill concludes forty years of ownership by the Davis family. The company was organized in 1894 by W. L. and David R. Davis. Stephen R. Davis has been president and manager since the death of his father, W. L. Davis, in 1932. The company employs 300 workers, with a normal annual payroll of $400,000.

Labor Troubles Averted

Further details of the manner in which the Nekoosa-Edwards Paper Company, Port Edwards, Wis., averted labor trouble became known when a meeting of all employees except those on shift was called last week to explain the basis of an agreement arrived at with the Chicago Reginal Labor Board and the papermakers' unions. The meeting was called by the mill council, which handled all labor policies with the management for years. Ernest Ross presided and Matt W. Randecker led the discussion. Carl Stellmacher, in elaboring on points discussed, urged continued support of the mill council as the collective bargaining agent of the employees. He pointed out that out of 35 major requests made to the company, 29 have been granted.

It was explained by Mr. Randecker that an early ruling under the NRA permitted a majority of employees to elect to bargain in a certain manner, and this majority should act for the entire group. This ruling was later reversed by the government, he said, and Section 7-A now provides that a group can represent only its own membership. The mill council represents three-fourths of the employees, and that proportion must stand for six months. The remainder will be represented by the A. F. of L. unions to which they belong.

Under the agreement signed with the A. F. of L. unions by John E. Alexander, first vice president and general manager, specified representatives of the unions will be recognized for collective bargaining of their particular groups. It is further understood that negotiations with any one group will be carried on with the full knowledge of all other groups eligible to bargain so that proportional representation shall prevail. Both the company and the unions have executed a signed agreement to refer all disputes to the Chicago Regional Labor Board. Finley F. Bell, of the labor board, assisted in completing the agreement.

Efforts to expand the union membership among employees of the Kimberly-Clark Corporation are being made by the International Brotherhood of Paper Makers, Pulp and Sulphite Workers. A meeting of the local at Kimberly, Wis., was held last week at which Ray Richards, an organizer and member of the executive board of the Wisconsin Federation of Labor, was the principal speaker.

News of the Industry

The annual meeting of the Northwest Division of the American Pulp and Paper Mill Superintendents Association will be held at Wausau, Wis., September 21 and 22. A large attendance is expected from Wisconsin, Minnesota and upper Michigan. Grover Keeth, of Wausau, is chairman of the arrangements, and expects to announce the program within a few days.

A recent checkup on rail shipments out of Appleton, Wis., indicates a considerable increase in the amount of paper tonnage sent out from local mills. The number of carloads exceeds the corresponding period of last year, and the earlier periods of 1934.

Two resignations are announced at the Lawrence Institute of Paper Chemistry at Appleton, Wis. George H. McGregor, instructor in pulp technology, has accepted a position in the pulp division of the Weyerhaeuser Timber Company, at Longview, Wash. He will leave September 15. Dr. Donald Starr, research assistant, has accepted a position as instructor of chemistry at Iowa State College, Ames, Iowa. Their successors have not been announced.

F. E. Saecker, president of the Appleton Machine Company, Appleton, Wis., was tendered a dinner last week by the employees in honor of his eightieth birthday anniversary. Mr. Saecker has been president of the company for the last 51 years, and is still active. His work has been an important factor in the development of paper and pulp mill machinery. Another honored guest was Carl Schnitzkewitz, foreman of the foundry, who has been with the company for 48 years. R. M. Radsch was toastmaster. A gift was presented to Mr. Saecker.

Announcement is made of the birth of a daughter last week to Mr. and Mrs. Stanton W. Mead, of Wisconsin Rapids, Wis. Mr. Mead is general manager of the Consolidated Water Power and Paper Company, and is a son of George W. Mead, president.

James Kreiss, of the Marathon Paper Mills Company, Menasha, Wis., and Miss Dorothy Larsen of Neenah, Wis., were married September 1 at the Kreiss home at Appleton, Wis. Miss Larsen formerly was secretary to S. F. Shattuck, vice president of the Kimberly-Clark Corporation.

Canada Looks for Increased Newsprint Prices

Higher Quotations May Result From Pressure Brought About by Increased Manufacturing Costs —Opposition From American Newspaper Publishers Allowed For—Shortage of Pulpwood and Uncertainty of Supplies Important Factors

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., September 4, 1934—Increasing costs are confidently expected to force an increase in the price of newsprint paper. In some quarters it is the opinion that prices will advance, though a more conservative view is that no change will take place until the end of the year. While those interested in securing a higher price for newsprint do not hold out any doubts as to the inevitability of an increase, there is no little opposition from the American publisher, who will be principally affected by the change in the cost of his most important raw material. It is recognized that the present selling price of newsprint does not permit of profitable operations. Due to lack of cooperation among the manufacturers, however, it has been impossible to secure united action in placing newsprint prices on a higher basis.

Since the establishment of the Newsprint Code Authority in the United States and the organization of an allied association in Canada known as Nemac (Newsprint Export Manufacturers' Association of Canada) the producers have managed to hold prices to a common level. There is not as yet whole-hearted cooperation among the manufacturers on a common price policy, but efforts to secure a better price and thus permit of profitable operations are more likely to come through pressure brought about by increasing manufacturing costs rather than by any action which might be taken by the manufacturers individually or collectively.

Tonnage More Satisfactory

At one time the volume of tonnage was the principal problem of the manufacturers. Since late last summer, however, the demand from American publishers has been the cause of manufacturing being stepped up to higher levels than have prevailed since 1928 or 1929. Several of the producers are now operating at capacity. Others are not doing so well, but, the industry as a whole, is operating at about two-thirds of its rated capacity. This in itself is encouraging, but when it is remembered that the net return per ton of newsprint at the mill for the first half of this year was probably less than a year ago, the advantage of additional tonnage is very largely minimized. Last year the Canadian producers were receiving a substantial premium on American funds when converted into Canadian dollars. This amounted to as much as $5 a ton or more during the first quarter of 1934. Since that time exchange rates between the Canadian and American dollar have reversed and today the Canadian manufacturer is converting his American dollar receipts into Canadian funds at a loss of about a dollar per ton. Thus over the past year the net return to the Canadian manufacturer has been reduced by approximately $6 a ton through the vagaries of exchange. Increased tonnage, on the other hand, has enabled the producer to cut his operating costs though probably not to the extent of the loss of exchange premium. The exchange situation in itself is a business risk which would not warrant increasing the price of newsprint paper. Other factors, however, have entered the situation, factors which have a more direct bearing on costs and on which the manufacturers both in Canada and the United States are basing their demands for an increased price.

Pulpwood Costs Important

During 1932 and 1933 the majority of manufacturers limited their woods operations to a minimum, the majority eating into their wood piles or buying from contractors or settlers in order to keep down their wood costs. It now has become necessary to replenish wood piles through a resumption of woods operations on a large scale. The supply of wood pulp at the moment is limited; well under what is regarded as normal for the current volume of business. Over the past two years woods operations have been reduced to a minimum. In addition weather conditions last year militated against getting logs out of the woods, so that mill supplies are far from being ample. Considerable uncertainty exists over the coming winter's cut. The banks are not too eager to advance money for woods operations when they are uncertain of the ability of the manufacturer to sell his product on a profitable basis. The producer with the necessary working capital to finance his pulpwood cut is in much the same position. So that unless there is some definite indication of price increase for newsprint paper, there is likely to be a short cut of pulpwood which by next summer may make for a shortage of pulpwood. This in turn might force an increase in paper prices beyond what is not expected. The cost of getting pulpwood out of the limits to the mill has increased. Though the supply of labor is plentiful, wages paid to woodsmen in Eastern Canada have increased from 10 to 15 percent. in recent months. On top of that the cost of equipping camps, such as the purchase of foodstuffs and other supplies, has gone up proportionately. During the more difficult times the Governments allowed certain concessions to operators in order to stimulate woods operations and thus provide a greater amount of employment. These concessions have now been largely eliminated. Both Quebec and New Brunswick Governments have increased the stumpage rates, thus adding to the cost of pulpwood.

NRA Adds to Expenses

In the mill labor costs have also gone up. Under the terms of the NRA Code the American manufacturers increased wages. A short time later similar action was taken in the Canadian mills. Woods and mill costs are materially higher today than they were a year ago, largely due to the enforcement of the NRA Code policies. While the NRA does not apply to Canada, the manufacturers in this country have had to adopt similar measures in order to hold their positions. The additional cost of producing newsprint is in a large measure due to the NRA policies, a factor which strengthens the hands of the producers in endeavoring to secure a better price from the American publishers in order to offset the advances.

Expect Price Increase

The publishers as a group are said to be reconciled to near approach of higher prices for newsprint, but are opposing such a move because of doubt as to the extent of the increase.

Chicago Paper Market Still Marking Time

Slightly Improved Condition Experienced, However, During Final Week of August—Various Grades of Fine Paper Continue Quiet—Outlook for Coarse Wrapping Paper Considered Promising—Paper Board Section Continues Listless

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 4, 1934—The final week of August showed a slightly improved condition over its immediate predecessor but the Chicago paper market is still more or less marking time—which doesn't mean that it is disregarding any sales efforts. Stocks in the Chicago area have fallen to a rather low state at present and there is a belief that when the business turn does come the upturn will be rather pronounced. Especially is this reported true in the coarse paper market where very poor demand during the summer has had some unsettling effect. Coarse paper jobbers here, however, feel that September, October and November should show a decided pick up because of the real need for paper on the part of buyers who have been holding off. Fine papers are quiet, with demand reported as spotty. Some mills with representatives in this vicinity report a fair amount of activity. The board market is said to be dull although Fall prospects are better. Book and cover papers are improved and seem, for the most part, to have given the best account of themselves during the week. Waste papers are only very moderately active at this time.

Paper Merchants Fight Chiselers

The test by fire of the paper code has been going on, as as far Chicago is concerned, for some weeks now. Executives of various paper concerns have been gravely watching developments and doing a splendid job of fighting "chiseler" activities reported in various instances. As long as demand was good, as earlier in the year, there seemed little or no effort to break away from the price range set up by code authorities and generally approved in this territory. In fact, a pronounced and admirable effort has been made to stick by the guns.

In recent weeks this demand, in almost all lines, has slid away until, in some cases, it has been almost negligible. This recession has had a marked tendency to eliminate the "we'll play ball" expressions of some concerns who, faced with lower demand, are reported to have been going out after anything. No particular line is reported to have escaped this trend.

To thinking executives this situation is particularly unfortunate inasmuch as buyers are simply holding back not because they have quit using paper but because they are affected by adverse conditions in their own industry. Their stocks, for the most part, are low and they will sooner or later be back in the market in an appreciable way. When that time comes it will be exceedingly unfortunate if the paper industry itself is unable to take advantage of the chance to offer merchandise at a price that makes profits possible. Thus it is that intense and fairly satisfactory efforts are being made here to hold things in line until demand is itself again.

Watervliet Plant Resumes

Reports coming into the Chicago paper market indicate that the Watervliet Paper Company, of near Benton Harbor, Mich., as successfully in getting back approximately 65 per cent of its employees last week when the factory reopened its plant following a strike of some weeks duration. It is understood that Watervliet is filling up its employment ranks day by day with no particular violence of any kind reported as yet. It is also understood that no concessions of any importance have been made by the plant to the agitators whom, it was reported, instigated the strike. Meanwhile Chicago paper representatives of Wisconsin and Michigan mills are closely watching developments in the little Michigan city. Agitators are reported at work in many other mills in this territory and the results of the Watervliet situation are certain to be of far reaching consequence in this particular territory.

Many of the paper executives are prone to blame Section 7-A of the Recovery Act as the main reason for the present labor situation. Chief of these is Ray Wantz, of the Rockford Fibre Container Corporation who, as head of the Illinois Manufacturers Association, has made many protests against this section and who now points to many serious labor difficulties as proof of the fact that Section 7-A is decidedly harmful and should be repealed when Congress convenes again.

Paper Salesmen's Activities

The Middle West division of the Salesmen's Association of the Paper Industry hopes to have W. W. Pickard, formerly deputy code administrator and now coordinator of the paper industry, at a possible luncheon event to be held at the time of the N.P.T.A. meetings September 24 to 27. If the plans are carried through the salesmen are certain to be the sponsors of two outstanding events at the Hotel Stevens, for Mr. Pickard's presence would certainly draw the attention of the industry here. The final golf outing at Flossmoor would be the other outstanding event sponsored by the SAPEYES. Dated for September 27, the event will be run off in plenty of time so that guests may take evening trains out of the city. Last year one of the very few difficulties encountered was the departure of many guests who couldn't stay for the banquet proceedings because of train schedules. With this fault eliminated by a mere speeding up of schedule the final golf outing is expected to whiz by as the best yet of these annual events.

News of the Trade

The paper industry in this area gave a good account of itself for the month ending July 15 as compared to the ten remaining groups appearing in Federal Reserve classifications for this district. The number of wage earners in the paper and printing industry declined only 0.5 per cent as compared to 4.5 per cent for the ten manufacturing groups, while the earnings declined only 2.4 per cent as compared to 10.9 for the group. The 574 firms reporting showed 63,588 wage earners with wages of $15,839,000. Figures cover paper and printing firms in Illinois, Indiana, Iowa, Wisconsin and Michigan.

Corwin Roach, president of the Capital City Paper Company, Springfield, Ill., was elected governor of the Illinois and eastern Iowa district of Kiwanis International at the annual convention of that organization held in Danville on August 29. Mr. Roach is widely known in the Illinois paper trade and has also taken an active part in the Illinois Paper Trade Association which has done some exceedingly fine work in cooperating with the code authority and with the National Paper Trade Association in kraft and coarse paper lines in particular.

Boston Paper Market Continues Fairly Active

Demand for Various Grades of Fine Paper Slightly Better—Tissues Moving Into Consumption In Excellent Volume—Wrapping Paper Displaying Steady Undertone—Box Board Quotations Remain Firm—Paper Stock Situation Improves

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., September 4, 1934 — The wholesale paper market, during the week under review, was fully up to the volume of the previous week, it is estimated from statements made by dealers, although still hardly better than fair. Fine paper showed a slight improvement. A great many inquiries, some of them rather large, are "floating around." Dealers hope for much better business after the holiday, in fact, the outlook for September is encouraging. Wrapping paper continued steady. The representative of a manufacturer of tissues notes an excellent tonnage for the summer, far better than that of a year ago, although the volume of business for that company the last week declined considerably from previous weeks. The box board market remained firm, holding up fairly well. The amount of business for August was very well sustained, but was not so good as the corresponding month in 1933, when there was much speculative buying. Conditions indicate that there will be much more activity in coming months. Box board houses were closed Saturday. Complaint is rife that "chisellers" are carrying on in spite of the Paper Code.

The paper stock market continued generally to improve in some quarters, though in others less buying has taken place. It is felt that the adjustment of prices of mixed papers and old newspapers to higher levels by Code officials has affected the amount of purchasing. Shipments during the week were subnormal. A mill which usually buys in 100-ton lots, took only 60 tons. Mills which have a plentiful supply on hand are not obliged to buy. At the same time, however, the price of old newspapers has advanced to .42½ @ .45 from .35 @ 37½. Some other grades of waste paper have advanced, it is felt, as a reflection of the higher prices of mixed papers and old newspapers. White blank news has been marked up to 1.05 @ 1.15, compared with a former price of .95 @1.05, print manila to .45 @ .50 from .40 @ .45, overissue news to .50 @ .55 from .45 @ .50, and corrugated boxes to .40 @ .45 from .35 @ .37½. With little or no call for foreign and domestic manila rope, under bagging, dealers have been making price concessions. Foreign manila rope is quoted at 1.90 @ 2.00, compared with 2.00 @ 2.12½ two weeks ago. Domestic manila rope was marked down to 2.00 @ 2.20 from 2.25 @ 2.37½. Of late more inquiry has developed from the fine writing paper mills for cotton cuttings. Prices of domestic and foreign rags remained unchanged.

Frank L. Jones, a former executive of the Atlantic National Bank, this city, where he was head of the foreign department, has been elected treasurer of Stimpson & Company, Inc., taking the place of Warren L. Chace, who is now connected with the Individual Drinking Cup Company, Inc., of Easton, Penn.

J. E. Catlin, of the Badger Paper Mills, Inc., Peshtigo, Wis., has been passing a few days in town, discussing Ta-Non-Ka Bond with the firm of Knight, Allen & Clark, Inc., who have the Boston agency, and their salesmen.

Arthur C. Hall, treasurer of John Carter & Company, Inc., is expected to return this week after a month's vacation.

Floyd H. Blackman, secretary of the D. F. Monroe Company, passed the week-end taking a motor trip to New Hampshire, accompanied by his family.

John F. Wilson, advertising manager for Carter, Rice & Co., Corp., has returned from a vacation, accompanied by his family, motoring through New Hampshire and points north.

C. S. Trefrey, New England representative of the Dill & Collins Company, Philadelphia, has returned from his summer residence on Cape Cod. He has been calling on the New England trade in the interests of the Dill & Collins line of papers.

William Steck, of William Steck & Co., Inc., paper stock dealers, New York City, called on the trade last week.

Wormstead, Smith & Loomis, Inc., have incorporated in this city to deal in paper products. Capital stock is $15,000; 750 shares $20 each. Robert W. Wormstead is president; Hubert H. Loomis, vice president, and Clarence H. Smith, 311 Atlantic Avenue, treasurer.

Indianapolis Leans To Better Demand

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., September 4, 1934—After having done a better than fair business in fine paper for the fall season during the middle of August, demand the last week slumped a trifle. Most of the initial stocks seem to be purchased and in the hands of printers or retailers and little active business is expected until after the coming week. The school season opens in most of the state next Monday with the college season a week later. Dealers are expecting a good business. Printers are in a good frame of mind and report some work already contracted and quite a lot in prospect. They expect booming prices in some of the basic commodities to result in more advertising.

Newsprint demand continues about the same with the level well above that of last year. The larger city papers seem particularly benefited, though in some of the cities there has not been the proportionate rise in lineage as in others.

Paper board manufacturers in the state report a good demand for this time of the year. They have been working at near capacity for the most part and their order files still are in good shape. There has been little effort to build up reserve stocks due to uncertainty concerning prices and the labor market.

Summer specialties continue in active demand, though hardly in the same volume as prevailed during the period when temperatures remained around the 100 degree mark. Little buying is expected from this time on, however, for with the opening of school demand always is cut sharply.

Container factories are working on good schedules and report a continued good business. The volume is better than last year and prices are holding firm. A good demand also is seen for wrapping papers and bags.

Paper stock men are a trifle more cheerful. Demand for waste paper is slowly picking up but there is uncertainty concerning prices. A fair demand is seen for shirt cuttings and the better grade of rags. Warehouse stocks here are heavy.

Demand for Paper Moderate in Philadelphia

Small Volume of Business Transacted Mainly of Strictly Routine Seasonal Character—One Leading Paper Merchant Reports Improved Warehouse Trade During August—Outlook for Closing Months of Year Considered Promising

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., September 4, 1934—With the vacation season over and the paper industry accustomed, after Labor Day, to quicken its pace and prepare for its most profitable season, it will be interesting to observe conditions and determine how far they may influence the volume of trade during the next few months.

By and large, the depression has affected every branch of the paper industry. But, with the advent of the Code, there was reflected marked improvement which continued until early summer, when, together with the protracted seasonal recession there was lacking anything in the way of encouraging recuperative power, and as far as was learned, only business of strict routine seasonal character —and necessarily of small volume—was transacted.

Meanwhile, members of the trade here are putting considerable emphasis on this belated stimulus in that it will reflect greater Fall activity with underlying price structure stabilized by their Code.

It is pleasurable to note, however, that in talking with an executive of one of the leading paper houses in this city, he stated that their warehouse business showed quite an improvement during the month of August over that of July, and that a well founded optimistic feeling prevails over what is to come in the next few months.

In the waste paper industry, a waiting attitude was everywhere evident, apparently desiring to determine how the waste paper minimum price set-up is likely to work out. Packers were seemingly greatly elated by the sudden jump of price levels on news and mixed paper above previously prevailing mill prices. The feeling is that the higher prices will lead to much larger collections, and therein lies the greatest danger—the accumulation of an immense surplus of supply which will hang over the market and undermine the price-fixing arrangement.

News of the Trade

At the headquarters of the Philadelphia Paper Trade Association, it was learned that Executive Secretary N. W. Walker is compiling a list for the Regional office in New York of the manufacturers who maintain local warehouse stocks here, in an effort to get some idea where the volume of paper is consumed. Mr. Walker stated that this was for statistical records. A meeting of the Sub-Committee for this area, of which W. S. Wilcox is chairman, is scheduled for September 10.

Garrett-Buchanan Company is developing something brand new to be known as Kenliworth plate paper. It is an all-purpose paper and is highly recommended for letter press printing or offset, working equally well for each process. It has a breautiful white color finish that will take halftones, and has good folding qualities, and on account of its opacity is exceptionally well adapted for maps, folders, broadsides and general printing work.

At the Dennison store, Chestnut near Tenth street, there are displayed what are known as Jiffy Bags. These bags are so insulated that they keep beverages hot or refreshingly cold for four hours. The cold bag has a content of 4-12 ounce bottles. Bread, biscuits, beans, soup and coffee likewise can be kept warm in the hot bag. A new gummed paper top for jelly glasses which keeps jellies airtight is also on display.

The absence of Henry Conradi, floor manager at Garrett-Buchanan Company, is keenly felt by all his friends, particularly the ladies. Mr. Conradi is convalescing at the West Jersey Homeopathic Hospital in Camden. He is expected to leave the hospital in about a week and be at his desk shortly thereafter.

Edward A. Keller, vice president and sales manager of the above company, is seen disporting his family in a brand new Packard automobile.

Mrs. Doris E. Lewis, secretary of the Philadelphia Paper Trade Association of Philadelphia, is enjoying well earned vacation.

Salesmen to Hold Final Golf Tournament

The Eastern Division of the Salesmen's Association of the Paper Industry will hold its Fourth and final Golf Tournament of the season on Thursday, September 13. Tamarack Country Club, Portchester, N. Y., has been selected for this Tournament and the contestants tee off at 1:30 p. m. The course, however, is open to any of the members and their guests who wish to play in the morning.

The *American Paper Merchant* Trophy, donated by Phil. Howard for annual competition between the Eastern and Western Divisions will also be competed for. The Trophy will consist of a Gavel and Bell to be used for one year by the winning Division at their meetings and outings. Each Division has selected a team of six or eight men—each team to play on the basis of the individual player's handicap and the team having the lowest net composite score is the winner.

President Bill Raymond is going to award a very substantial prize to the winner of the best selected nine holes—half of handicap applying. Both Divisions will compete for the President's Trophy.

Tamarack is a beautiful Club and a game on this course will be most enjoyable. The cost of this day's outing will be $7.00 per person, which includes luncheon, greens fees, and dinner. This fee may be paid on the day of the Tournament but it will assist the committee considerably if the members will arrange to forward their checks with reservations to William B. McGoldrick, chairman of the Golf Committee, 60 East 42nd street, New York.

Canadian Pulpwood for France

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 4, 1934—A shipment of pulpwood of an experimental nature and comprising 2,000 cords is being assembled at Windsor, N. S., for export to France and, if satisfactory, expectations are that it will lead to large orders from this new source. It will go forward this fall.

This order is the result of negotiations between the Provincial Marketing Board and French buyers, and every effort is being made to have it of the highest class. A short time ago representatives of French pulp interests were in the meantime looking the situation over, and it was stated at the time that conditions were very favorable for a substantial slice of the French trade being secured by Canada.

PAPER AWARDS FOR GOVERNMENT PRINTING OFFICE

(Continued from page 13)

50 Per Cent Rag Machine-Finish Book

No. 20—40,000 lbs., 25x38—80; flat, cut 32x48 ins. Champion Coated Paper Co., last quarter 1934, 10.09 cents; first quarter 1935, 10.34 cents.

No. 21—100,000 lbs., 25x38—80; flat, cut 38x48 ins. Champion Coated Paper Co., last quarter 1934, 10.09 cents; first quarter 1935, 10.34 cents.

No. 22—50,000 lbs., 25x38—80 and 90; flat, cut any size, min. width 24 ins., max. width 42 ins. Champion Coated Paper Co., last quarter 1934, 80 lb., 10.09 cents; 90 lb., 9.60 cents; first quarter 1935, 80 lb., 10.34 cents; 90 lb. 9.85 cents.

75 Per Cent Rag Laid Antique Book

No. 23—20,000 lbs., 25x38—140; flat, cut 24x38 and 29x41 ins.; the laid marks to run the 24-inch direction of the sheet; the grain and chain marks to run lengthwise of the sheet. Dill & Collins, Inc., last quarter 1934, 14.31 cents; first quarter 1935, 14.56 cents.

100 Per Cent Rag Machine-Finish Book

No. 24—5,000 lbs., 25x38—90; flat, cut 2x38 ins.; the grain to run lengthwise of the sheet. Min. order 5,000 lbs. American Writing Paper Co., Inc., last quarter 1934, 16.25 cents; first quarter 1935, 16.50 cents.

No. 25—15,000 lbs., 25x38—140; flat, cut 24x38 ins.; the grain to run lengthwise of the sheet. American Writing Paper Co., Inc., last quarter 1934, 16.25 cents; first quarter 1935, 16.50 cents.

Supercalendered Book

No. 26—10,000 lbs., 25x38—90; flat, cut 32x48 ins. Min. order 10,000 lbs. Bermingham & Prosser Co., last quarter 1934, 5.50 cents; first quarter 1935, 5.75 cents.

No. 27—250,000 lbs., 25x38—90; flat, cut 31¼x45½ ins. Bermingham & Prosser Co., last quarter 1934, 5.50 cents; first quarter 1935, 5.75 cents.

No. 28—200,000 lbs., 25x38—90; flat, cut 24x38 and 38x48 ins. R. P. Andrews Paper Co., last quarter 1934, 5.50 cents; first quarter 1935, 5.75 cents.

No. 29—200,000 lbs., 25x38—90; rolls, 38 ins. wide (3-inch iron cores). Stanford Paper Co., last quarter 1934, 4.98 cents; first quarter 1935, 5.23 cents.

No. 30—200,000 lbs., 25x38—90; rolls, 28¼ and 38 ins. wide (3-inch iron cores). R. P. Andrews Paper Co., last quarter 1934, 4.98 cents; first quarter 1935, 5.23 cents.

No. 31—10,000 lbs., 25x38—90 and 100; flat, cut any size, min. width 24 ins., max. width 42 ins. Min. order, one weight, 10,000 lbs. R. P. Andrews Paper Co., last quarter 1934, 5.50 cents; first quarter 1935, 5.75 cents.

50 Per Cent Rag Supercalendered Book

No. 32—15,000 lbs., 25x38—80 and 90; flat, cut 32x48 ins. Min. order, one weight, 12,500 lbs. Champion Coated Paper Co., last quarter 1934, 80 lbs. 10.83 cents; 90 lb. 10.34 cents; first quarter 1935, 80 lb. 11.08 cents; 90 lb. 10.59 cents.

Halftone Book

No. 34—40,000 lbs., 25x38—140; flat, cut 24x38 and 38x38 ins. Champion Coated Paper Co., last quarter 1934, 5.25 cents; first quarter 1935, 5.50 cents.

Single Coated Book

No. 35—100,000 lbs., 25x38—140; flat, cut 29x41, 38x48, and 41x52 ins.; the grain to run lengthwise of the sheet. Champion Coated Paper Co., last quarter 1934, 6.35 cents; first quarter 1935, 6.60 cents.

Double Coated Book

No. 36—25,000 lbs., 25x38—140 and 160; flat, cut 24x32, 24x38, and 38x48 ins.; the grain to run lengthwise of the sheet. Champion Coated Paper Co., last quarter 1934, 7.10 cents; first quarter 1935, 7.35 cents.

50 Per Cent Rag Double Coated Book

No. 37—15,000 lbs., 25x38—140 and 160; flat, cut 24x32, 24x38, 32x42, 38x48, and 41x52 ins; grain to run lengthwise of the sheet. Dill & Collins, Inc., last quarter 1934, 13.13 cents; first quarter 1935, 13.38 cents.

50 Per Cent Rag Machine-Finish Lithograph

No. 40—25,000 lbs., 25x38—160; flat, cut 26x38 ins., the grain to run lengthwise of the sheet. Champion Coated Paper Co., last quarter 1934, 9.99 cents; first quarter 1935, 19.24 cents.

Mimeograph, White and Colored

No. 43—1,500,000 lbs., white Nos. 40 and 48; flat, cut 24½x30½, 24½x38, 26x42½, and 28½x34½ ins.; the grain to run lengthwise of the sheet. Cauthorne Paper Co., Inc., last quarter 1934, 5.57 cents; first quarter 1935, 5.82 cents.

No. 44—200,000 lbs. blue, buff, green, pink and yellow, No. 40; flat, cut 24½x30½, 24½x32, 24½x38, and 26x42½ ins.; the grain to run lengthwise of the sheet. Min. order, one color, 10,000 lbs. H. C. Davis Co., last quarter 1934, 6.54 cents; first quarter 1935, 6.97 cents.

25 Per Cent Rag Mimeograph

No. 47—1,200,000 lbs., Nos. 40 and 48; flat, cut 24½-x30½, 24½x32, 24½x38, 26x42½, and 28½x34½ ins.; the grain to run lengthwise of the sheet. Aetna Paper Co., six months, 10.81 cents.

Blue U S M O Safety Writing

No. 51—400,000 lbs., No. 32; rolls, 11 and 22 ins., wide, 24 ins. in diameter (3-inch iron cores). George La Monte & Sons, six months, 7.47 cents.

U S M O Writing, White and Blue

No. 52—8,000 lbs., No. 32; rolls, 8½ ins. wide, 24 ins. in diameter (3-inch iron cores). Min. order, either color, 4,000 lbs. American Writing Paper Co., last quarter 1934, white 6.06 cents; blue, 7.03 cents; first quarter 1935, white 6.31 cents; blue, 7.28 cents.

Safety Writing, Colored

No. 53—25,000 lbs., blue, gray, green, pink, salmon, and yellow, No. 40; flat, cut 17x28, 21x32, and 22x34 ins. Min. order, one color, 2,000 lbs. Barton, Duer & Koch Paper Co., six months, 9.20 cents.

Sulphite Writing, White and Colored

No. 55—1,000,000 lbs., white, No. 32; flat, cut 21x32, 22x34, 24x38, 26x34½, 28x34 and 32x42 ins. Perkins-Goodwin Co., last quarter 1934, 5.57 cents; first quarter 1935, 5.82 cents.

No. 56—1,500,000 lbs., white, Nos. 40 and 48; flat, cut 21x32, 22x34, 23x36, 24x38, 27x35, 28x34, and 32x42 ins. R. P. Andrews Paper Co., last quarter 1934, 5.57 cents; first quarter 1935, 5.82 cents.

No. 57—50,000 lbs., white, No. 26; rolls, min. width 16 ins., max. width 38 ins. (3-inch iron cores). Cauthorne Paper Co., last quarter 1934, 6.33 cents; first quarter 1935, 6.58 cents.

No. 58—300,000 lbs., white, No. 32; rolls, min. width 16 ins., max. width 38 ins. (3-inch iron cores). Cauthorne Paper Co., last quarter 1934, 4.99 cents; first quarter 1935, 5.24 cents.

No. 59—250,000 lbs., white, Nos. 40 and 48; rolls, min. width 16 ins., max. width 38 ins. (3-inch iron cores). Cauthorne Paper Co., last quarter 1934, 4.99 cents; first quarter 1935, 5.24 cents.

No. 60—10,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 26; flat, cut 21x32, 22x34, 24x38, and 28x34 ins. Min. order, one color, 5,000 lbs. Perkins-Goodwin Co., last quarter 1934, 7.88 cents; first quarter 1935, 8.13 cents.

No. 61—800,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, Nos. 32 and 40; flat, cut 21x32, 22x34, 24x38, 27x35, 28x34, and 32x42 ins. Min. order, one color, 10,000 lbs. Aetna Paper Co., last quarter 1934, 6.54 cents; first quarter 1935, 6.79 cents.

No. 62—60,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, Nos. 26, 32, and 40; rolls, min. width 17 ins., max. width 38 ins. (3-inch iron cores). Min. order, one substance, one color, 5,000 lbs. Perkins-Goodwin Co., last quarter 1934, No. 26, 7.30 cents; Nos. 32 and 40, 5.96 cents; first quarter 1935, No. 26, 7.55 cents; Nos. 32 and 40, 6.21 cents.

100 Per Cent Rag White Writing

No. 63—2,500 lbs., Vellum finish, Tub-sized, Air-dried, No. 56; flat, cut 21x32 ins. Min. order 2,500 lbs. All bids rejected.

Lithograph-Finish Map

No. 64—5,000 lbs., Nos. 32 and 40; flat, cut 24x38, 30x40, 32x48, 36x52, and 38x48 ins. Min. order, one substance, 5,000 lbs. Old Dominion Paper Co., last quarter 1934, 5.57 cents; first quarter 1935, 5.82 cents.

50 Per Cent Rag Lithograph-Finish Map

No. 65—50,000 lbs., Tub-sized, Air-dried, Nos. 40, 48, and 56; flat, cut any size, min. width 25 ins., max. width 48 ins.; the grain to run lengthwise of the sheet. Barton, Duer & Koch Paper Co., six months, 13.96 cents.

75 Per Cent Rag Lithograph-Finish Map

No. 66—120,000 lbs., Tub-sized, Air-dried, Nos. 32 and 40; flat, cut any size, min. width 24 ins., max. width 48 ins.; the grain to run lengthwise of the sheet. Barton, Duer & Koch Paper Co., six months, 19.78 cents.

No. 67—80,000 lbs., Tub-sized, Air-dried, Nos. 48 and 56; flat, cut any size, min. width 30 ins., max. width 48 ins.; the grain to run lengthwise of the sheet. Min. order, one substance, 5,000 lbs. Barton, Duer & Koch Paper Co., six months, 19.78 cents.

100 Per Cent Rag White Chart, Lithograph-Finish

No. 69—180,000 lbs., Tub-sized, Air-dried, No. 96; flat, cut any size, min. width 22 ins., max. width 46 ins.; 4-inch band around each 500 sheets; the grain to run lengthwise of the sheet unless otherwise specified. Reese & Reese, Inc., six months, 19.30 cents.

Sulphite Manifold, White and Colored

No. 70—100,000 lbs., white, Nos. 16 and 18; flat, cut 21x32, 22x34, and 28x34 ins.; the grain to run the 21-inch way on the 21x32-inch size. Whitaker Paper Co., No. 16, six months 9.70 cents; No. 18, six months, 8.61 cents.

No. 71—50,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow No. 18; flat, cut 21x32, 22x34, and 28x34 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 5,000 lbs. Whitaker Paper Co., six months, 9.70 cents.

No. 72—6,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 18; rolls, min. width 17 ins., max. width 38 ins. (3-inch iron cores). Min. order, one color, 3,000 lbs. Whitaker Paper Co., six months, 8.73 cents.

50 Per Cent Rag Manifold, White and Colored

No. 73—30,000 lbs., white, No. 14; flat, cut 21x32, 22x34, 28x34, and 38x48 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order 5,000 lbs. Barton, Duer & Koch Paper Co., six months, 19.00 cents.

No. 74—300,000 lbs., white, No. 18; flat, cut 21x32, 22x34, 24x38, and 28x34 ins.; the grain to run the 21-inch way on the 21x32-inch size. J. W. Butler Paper Co., six months, 16.00 cents.

No. 75—9,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 14ffi flat, cut 21x32, 22x34, and 28x34 ins.; the grain to run the 21inch way on the 21x32-in. size. Min. order, one color, 3,000 lbs. Barton, Duer & Koch Paper Co., six months, 23.50 cents.

No. 76—50,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 18; flat, cut 21x32, 22x34, 24x38, and 28x34 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 5,000 lbs. Corrill A. Hubbard, six months, 20.25 cents.

100 Per Cent Rag Manifold, White and Colored

No. 78—5,000 lbs., white, Tub-sized, Air-dried, No. 14; flat, cut 17x28, 19x24, 21x32, and 22x34 ins.; the grain to run the 21-inch way on the 21-32-inch size. Min. order 5,000 lbs. Old Dominion Paper Co., six months, 47.11 cents.

No. 79—10,000 lbs., white, Tub-sized, Air-dried, No. 18; flat, cut 17x28, 19x24, 21x32, and 22x34 ins.; the grain to run the 21-inch way on the 21-32-inch size. Min. order, 5,000 lbs. Old Dominion Paper Co., six months, 36.63 cents.

No. 80—4,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 14; flat, cut 17x28, 19x24, 21x32, 22x34, and 26x32 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 2,000 lbs. Old Dominion Paper Co., six months, 48.50 cents.

No. 81—4,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 18; flat, cut 17x28, 21x32, 22x34, and 24x38 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 2,000 lbs. Old Dominion Paper Co., six months, 37.71 cents.

50 Per Cent Rag White Glazed Manifold

No. 83—50,000 lbs., No. 16; flat, cut 19x24 and 21x32 ins.; the grain to run the 21-inch way on the 21x34-inch size. Min. order 20,000 lbs. Old Dominion Paper Co., six months, 20.50 cents.

Sulphite Bond, White and Colored

No. 101—5,000 lbs., white, No. 26; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order 5,000 lbs. Perkins-Goodwin Co., last quarter 1934, 17.51 cents; first quarter 1935, 7.76 cents.

No. 102—250,000 lbs., white, Nos. 32 and 40; flat, cut any size, min. width 17 ins.; max. width 32 ins. American Writing Paper Co., Inc., last quarter 1934 6.06 cents; first quarter 1935, 6.31 cents.

No. 103—5,000 lbs., white No. 48; flat, cut any size, min. width 17 in., max. width 32 ins. Min. order 5,000 lbs. Perkins-Goodwin Co., last quarter 1934, 6.06 cents; first quarter 1935, 6.31 cents.

No. 104—8,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, Nos. 32 and 40; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one substance, one color, 2,000 lbs. Perkins-Goodwin Co., last quarter 1934, 7.03 cents; first quarter 1935, 7.28 cents.

No. 105—4,000 lbs., blue, buff, cherry, green, pink, salmon, and yellow, No. 48; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one color, 2,000 lbs. Perkins-Goodwin Co., last quarter 1934, 7.03 cents; first quarter 1935, 7.28 cents.

25 Per Cent Rag Bond, White and Colored

No. 108—140,000 lbs., white, Tub-sized, Air-dried, No. 26; flat, cut 21x32, 23x36, 24x38, and 28x34 ins. R. P. Andrews Paper Co., six months, 13.61 cents.

No. 109—60,000 lbs., white, Tub-sized, Air-dried, No. 32; flat, cut 22¾x31½ ins. Opacity: Not less than 75 per cent. Ash: May exceed 5 per cent. R. P. Andrews Paper Co., six months, 11.06 cents.

No. 110—300,000 lbs., white, Tub-sized- Air-dried, No. 32; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 11.06 cents.

No. 111—500,000 lbs., white, Tub-sized, Air-dried, No. 40; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 10.83 cents.

No. 112—500,000 lbs., white, Tub-sized, Air-dried, No. 40; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 10.83 cents.

No. 113—300,000 lbs., white, Tub-sized, Air-dried, No. 48; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 10.83 cents.

No. 114—60,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, No. 26; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one color, 5,000 lbs. R. P. Andrews Paper Co., six months, 14.63 cents.

No. 115—300,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, No. 32; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 11.98 cents.

No. 116—250,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, No. 40; flat, cut any size, imn. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 11.98 cents.

No. 117—100,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, No. 48; flat, cut any size, min. width 17 ins., max. width 32 ins. R. P. Andrews Paper Co., six months, 11.98 cents.

50 Per Cent Rag Bond, White and Colored

No. 120—40,000 lbs., white, Tub-sized, Air-dried, No. 26; flat, cut 21x32, 23x36, 24x38, and 28x34 ins. Champion Coated Paper Co., six months, 17.42 cents.

No. 121—500,000 lbs., white, Tub-sized, Air-dried, Nos. 32 and 40; flat, cut any size, min. width 17 ins., max. width 32 ins. Aetna Paper Co., six months, 14.06 cents.

No. 122—100,000 lbs., white, Tub-sized, Air-dried, No. 48; flat, cut any size, min. width 17 ins., max. width 32 ins. Curtis & Bros. Co. of Pa., six months, 14.06 cents.

No. 123—20.000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, Nos. 26, 32, and 40; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one color, one substance, 2,500 lbs. Champion Coated Paper Co., six months, No. 26, 18.39 cents; and Nos. 32 and 40, 15.03 cents.

75 Per Cent Rag White Bond

No. 125—2,500 lbs., Tub-sized, Air-dried, No. 26; flat, cut any size, min. width 17 ms., max. width 32 ins. Min. order 2,500 lbs. Walker, Goulard Plehn Co., Inc., six months, 24.57 cents.

No. 126—2,500 lbs., Tub-sized, Air-dried, Nos. 32, 40, and 47; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one substance, 2,500 lbs. Walker, Goulard Plehn Co., Inc., six months, 19.88 cents.

100 Per Cent Rag White Bond

No. 128—6,000 lbs., Tub-sized, Air-dried, Nos. 32 and 40; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one substance, 2,000 lbs. Walker, Goulard Plehn Co., Inc., six months, 26.67 cents.

No. 129—2,000 lbs., Tub-sized, Air-dried, No. 48; flat, cut any size min. width 17 ins., max. width 32 ins. Min. order 2,000 lbs. Walker, Goulard Plehn Co., Inc., six months, 26.67 cents.

100 Per Cent Rag Declaration Bond

No. 140—3,000 lbs., Tub-sized, Air-dried, Nos. 32 and 40; flat, cut 17x22, and 22x25½ ins. Min. order, one substance, 3,000 lbs. Walker, Goulard Plehn Co., Inc. six months, 26.67 cents.

100 Per Cent Rag Parchment Deed

No. 141—2,000 lbs., Tub-sized, Air-dried, No. 64; flat, cut 33x34 ins. Min. order 2,000 lbs. Walker, Goulard Plehn Co., six months, 26.67 cents.

Sulphite Ledger, White and Colored

No. 151—40,000 lbs., white, Nos. 56 and 64; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order, one substance 10,000 lbs. Champion Coated Paper Co., last quarter 1934, 6.54 cents; first quarter 1935, 6.79 cents.

No. 152—50,000 lbs., white, No. 80; flat, cut any size, min. width 17 ins., max. width 32 ins. Min. order 10,000 lbs. Old Dominion Paper Co. last quarter 1934, 6.54 cents; first quarter 1935, 6.79 cents.

No. 153—4,000 lbs., blue, buff, green, pink, salmon, and yellow, No. 80; flat, cut 21x32½ ins. Min. order, one color, 2,000 lbs. Champion Coated Paper Co., last quarter 1934, 7.51 cents; first quarter 1935, 7.76 cents.

25 Per Cent Rag Ledger, White and Colored

No. 154—30,000 lbs., white, Tub-sized, Air-dried, Nos. 48 and 56; flat, cut 20x28, 21x32, 24x38, 28x29, and 28x34 ins. Min. order, one substance, 5,000 lbs. R. P. Andrews Paper Co., six months 11.98 cents.

No. 155—5,000 lbs., white, Tub-sized, Air-dried, No. 64; flat, cut 21x32 and 23x36 ins. Min. order of 5,000 lbs. Perkins-Goodwin Co., six months, 12.61 cents.

No. 156—5,000 lbs., white, Tub-sized, Air-dried, No. 72; flat, cut 20x28, 21x32, 24x38, and 28x34 ins. Min. order 5,000 lbs.. Perkins-Goodwin Co., six months, 12.61 cents.

No. 157—6,000 lbs., Tub-sized, Air-dried, blue, buff, green, pink, salmon, and yellow, Nos. 56, 64, and 72; flat cut 21x32, 23x36, 24x38, and 28x34 ins. Min. order, one substance, one color, 3,000 lbs. Perkins-Goodwin Co., 13.58 cents.

50 Per Cent Rag Ledger, White and Colored

No. 160—70,000 lbs., white, Tub-sized, Air-dried, Nos. 48 and 56; flat, cut 18½x36, 18½x40¼, 20x28, 21x32, 24x38, 28x29, and 28x34 ins. Min. order, one substance

10,000 lbs. Perkins, Goodwin Co., six months, 15.03 cents.

No. 161—40,000 lbs., white, Tub-sized, Air-dried, No. 64; flat, cut 21x32, and 23x36 ins. Min. order 10,000 lbs. Old Dominion Paper Co., six months, 15.03 cents.

No. 162—60,000 lbs., white, Tub-sized, Air-dried, Nos. 72 and 80; flat, cut 20x28, 21x32, 24x38, and 28x34 ins. Min. order 10,000 lbs. Old Dominion Paper Co., six months, 15.03 cents.

No. 163—20,000 lbs., white, Tub-sized, Air-dried, No. 88; flat, cut 21x32½ ins. Min. order 10,000 lbs. Old Dominion Paper Co., six months, 15.03 cents.

No. 164—60,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon and yellow, Nos. 56, 64, and 72; flat cut 18½x36, 18½40¼, 19x24, 21x32, 23x36, and 28x34 ins. Min. order, one substance, one color, 5,000 lbs. Perkins, Goodwin Co., six months, 16.00 cents.

No. 165—20,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, fawn, green, pink, salmon, and yellow, No. 88; flat, cut 21x32½ ins. Min. order, one color, 5,000 lbs. Perkins, Goodwin, Co., 16.00 cents.

75 Per Cent Rag Ledger, White and Colored

No. 168—20,000 lbs., white, Tub-sized, Air-dried, Nos. 48 and 56; flat, cut 21x32, 24x38, 28x29, and 28x34 ins. Min. order, one substance, 5,000 lbs. Whiting Paper Co., six months, 20.85 cents.

No. 169—15,000 lbs., white, Tub-sized, Air-dried, No. 64; flat, cut 21x32, 23x36, 24x38, and 28x34 ins. Min. order 5,000 lbs. Walker, Goulard, Plehn Co., six months, 20.85 cents.

No. 170—10,000 lbs., white, Tub-sized, Air-dried, Nos. 72 and 80; flat, cut 20x28, 21x32, 24x38, and 28x34 ins. Min. order, one substance, 5,000 lbs. Carpenter Paper Co., six months, 20.85 cents.

No. 171—40,000 lbs., white, Tub-sized, Air-dried, No. 88; flat, cut 21x32½ ins. Min. order 5,000 lbs. Carpenter Paper Co., six months 20.85 cents.

No. 172—9,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon, and yellow, Nos. 56, 64, and 72; flat, cut 21x32, 23x36, 24x38, and 28x34 ins. Min. order, one substance, one color, 3,000 lbs. Perkins, Goodwin Co., six months, 21.82 cents.

No. 173—12,000 lbs., Tub-sized, Air-dried, blue, buff, cherry, fawn, green, pink, salmon, and yellow, No. 88; flat, cut 21x32½ ins. Min. order, one color, 4,000 lbs. Perkins, Goodwin Co. Six months, 21.82 cents.

100 Per Cent Rag White Ledger

No. 176—15,000 lbs, Tub-sized, Air dried, No. 48; flat, cut 21x32, 22¾x31½, 23x36, 24x38, and 28x34 ins. Min. order 5,000 lbs. Barton, Duer & Koch Paper Co., six months, 27.64 cents.

No. 177—15,000 lbs., Tub-sized, Air dried, No. 56; flat, cut 20x28, 21x32, 23x36, 24x38, and 28x34 ins. Min. order 5,000 lbs. Barton, Duer & Koch Paper Co., six months, 27.64 cents.

No. 178—10,000 lbs., Tub-sized, Air dried, No. 64; flat, cut 18½x42, 21x32, 23x36, and 28x34 ins. Min. order 5,000 lbs. Barton, Duer & Koch Paper Co., six months, 27.64 cents.

No. 179—10,000 lbs., Tub-sized, Air dried, No. 72; flat, cut 20x28, 21x32, 24x38, and 28x34 ins. Min. order 5,000 lbs. Coy, Hunt & Co., six months, 27.64 cents.

No. 180—4,000 lbs., Tub-sized, Air dried, No. 80; flat, cut 21x32½ and 21x42 ins. Min. order 4,000 lbs. Coy, Hunt & Co., six months, 27.64 cents.

No. 181—15,000 lbs., Tub-sized, Air dried, No. 88, flat, cut 20½x24¾, 21x32½, and 22¾x31½ ins. Min. order 5,000 lbs. Coy, Hunt & Co., six months, 27.64 cents.

Sulphite Index, White and Colored

No. 184—40,000 lbs., white, 22½x28½—182 and 230; flat, cut 21x32½, 22½x28½, and 24½x32½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight 10,000 lbs. Virginia Paper Co., six months, 5.57 cents.

No. 185—2,000 lbs., white, 22½x28½—280 and 362; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 2,000 lbs. Mathers-Lamm Paper Co., six months, 5.82 cents.

No. 186—2,000 lbs., blue, buff, fawn, green, pink, salmon, and yellow, 22½x28½—282 and 230; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight, 2,000 lbs. Mathers-Lamm Paper Co., six months, 6:30 cents.

No. 187—2,000 lbs., blue, buff, fawn, green, pink, salmon, and yellow, 22½x28½—280 and 362; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight, 2,000 lbs. Mathers-Lamm Paper Co., six months, 6.30 cents.

50 Per Cent Index, White and Colored

No. 190—150,000 lbs., white, Tub-sized, 22½x28½—182 and 230; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 10,000 lbs. Whiting Paper Co., six months, 13.03 cents.

No. 191—15,000 lbs., white, Tub-sized, 22½x28½—280 and 362; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 5,000 lbs. Walker, Goulard & Plehn Co., six months, 13.02 cents.

No. 192—40,000 lbs., Tub-sized, blue, buff, fawn, green, pink, salmon, and yellow, 22½x28½—182 and 230; flat, cut 21x32½ and 22½x28½ ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight, 5,000 lbs. Walker, Goulard & Plehn Co., six months, 13.96 cents.

No. 193—15,000 lbs., Tub-sized, blue, buff, fawn, green, pink, salmon, and yellow, 22½x28½—280 and 362; flat, cut 21x32½ and 22½ and 28½ ins., with projecting colored marker between each 100 sheets. Min. order, one color, one weight, 5,000 lbs. Walker, Goulard & Plehn Co., six months, 13.96 cents.

100 Per Cent Rag White Index

No. 196—90,000 lbs., Tub-sized, Air dried, 22½x28½—approximately 206; flat, cut 20½x30½ and 21x32½ ins. Carew Manufacturing Co., six months, 24.21 cents.

White Tissue

No. 197—2,000 lbs., flat, 21x32—18. Min. order 1,000. Mathers-Lamm Paper Co., six months, 9.76 cents.

Facing Stereo Tissue

No. 198—500 lbs., 19x24—9; rolls 24 ins. wide (3-inch iron cores.) Min. order 500 lbs. Bids rejected.

Coated Cover, Colored

No. 201—25,000 lbs., Indian tint, light green, light gray, and primrose. Flat, 26½x41—208. Champion Coated

Paper Co., last quarter 1934, 7.35 cents; first quarter 1935, 7.60 cents.

25 Per Cent Rag Machine-Finish Cover, Colored

No. 203—15,000 lbs., quaker-drab, robin's egg, and terra cotta; flat, 20x25—96; in wrapped bundles, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 2,500 lbs. R. P. Andrews Paper Co., six months, 10.76 cents.

No. 204—90,000 lbs., blue, brown, granite, green, pink, tea, and yellow 20x26—100; flat, cut 20x25 and 33x46 ins., in wrapped bundles, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 5,000 lbs. R. P. Andrews Paper Co., six months, 10.76 cents.

50 Per Cent Rag Laid Cover, Colored

No. 205—20,000 lbs. (manufacturer's stock shades as selected), blue, buff, cream, white, gray, green, and terra cotta, 20x26—130; flat, cut 20x25 and 26½x41 ins., in wrapped bundles, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 2,000 lbs. Bids rejected.

50 Per Cent Rag Antique Cover, Colored

No. 206—20,000 lbs., dawn, gobelin-blue, khaki, moss-green, sage, and suede; flat, 20x25—96; in wrapped bundles, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 5,000 lbs. R. P. Andrews, Paper Co., six months, 12.56 cents.

Wood Manila

No. 209—50,000 lbs., 24x36—80 to 120; flat, cut 21x32, 22½x34½, and 25x38 ins., in wrapped bundles with projecting colored-paper marker between each 500 sheets. Cauthorne Paper Co., six months, 3.63 cents.

No. 210—100,000 lbs., 24x36—80 to 120; rolls, 18 and 21 ins. wide (3-inch iron cores.) Cauthorne Paper Co., six months, 3.38 cents.

Sulphite Manila

No. 211—10,000 lbs., 24x36—100 to 160; flat, cut any size, in wrapped bundles of 500 sheets. Min. order, one weight, 5,000 lbs. Bids rejected.

Rope Manila

No. 213—20,000 lbs., 24x36—120, 140, and 160; rolls 18 and 48 ins. wide (3-inch iron cores). Min. order 5,000 lbs. Reese & Reese, Inc., last quarter 1934, 10.50 cents; first quarter 1935, 10.75 cents.

No. 214—15,000 lbs., 24x36—280; rolls 48 ins. wide (3-inch iron cores). Min. order 5,000 lbs. Reese & Reese, last quarter 1934, 10.00 cents; first quarter 1935, 10.25 cents.

Drumhead Manila

No. 215—5,000 lbs., 24x36—280; flat, cut 26x42 ins. Min. order 5,000 lbs. Reese & Reese, last quarter 1934, 14.00 cents; first quarter 1935, 14.25 cents.

No. 2 Kraft

No. 217—80,000 lbs., 24x36—80 to 160; flat, cut any size, in wrapped bundles. Whitaker Paper Co., last quarter 1934, 4.28 cents; first quarter 1935, 4.53 cents.

No. 218—200,000 lbs., 24x36—80 to 160; cut in any size, folded (25 sheets per fold) in wrapped bundles. Whitaker Paper Co., last quarter 1934, 4.53 cents; first quarter 1935, 4.77 cents.

No. 219—200,000 lbs., 24x36—80 to 160; rolls, 9, 11½, 24, 36, 39, and 48 inches wide, wound on wooden plugs, 1½-inch hole, or on 3-inch iron cores as may be specified. Whitaker Paper Co., last quarter 1934, 4.04 cents; first quarter 1935, 4.28 cents.

No. 1 Kraft

No. 220—6,000 lbs., 24x36—120 and 160; flat, cut any size, in wrapped bundles. No bids.

White Paraffin

No. 251—1,000 lbs., flat, 24x38—32. Min. order 1,000 lbs. Mathers-Lamm Paper Co., six months, 8.24 cents.

White Gummed

No. 252—150,000 sheets; flat, 17x22—40, exclusive of weight of gum used. Min. order 50,000 sheets. Cawthorne Paper Co., last quarter 1934, $4.41; first quarter 1935, $4.66.

Blotting, White and Colored

No. 254—16,000 lbs., white, flat, 19x24—160; in wrapped bundles. Min. order 4,000 lbs. R. P. Andrews Paper Co., six months, 7.76 cents.

No. 255—2,000 lbs., (manufacturer's stock shade), buff and salmon; flat, 19x24—160; in wrapped bundles. Min. order 2,000 lbs. R. P. Andrews Paper Co., six months, 7.76 cents.

25 Per Cent Rag Blotting, White and Colored

No. 256—20,000 lbs., white, flat, 19x24—160; in wrapped bundles. Min. order 10,000 lbs. R. P. Andrews Paper Co., six months, 9.21 cents.

No. 257—4,000 lbs. (manufacturer's stock shade), buff and salmon; flat, 19x24—160; in wrapped bundles. Min. order, one color, 2,000 lbs. R. P. Andrews Paper Co., six months, 9.70 cents.

Desk Blotting, Colored

No. 258—10,000 lbs., (manufacturer's stock shade) blue and buff; flat, 19x24—200; in wrapped bundles. Min. order, one color, 5,000 lbs. R. P. Andrews Paper Co., six months, 7.76 cents.

No. 259—60,000 lbs., (manufacturer's stock shade, moss-green, 19x24—200; in wrapped bundles. Min. order 10,000 lbs. R. P. Andrews Paper Co., six months, 7.76 cents.

White Stereotype Molding

No. 260—2,000 lbs., 19x24—120; rolls, 24 ins. wide (3-inch iron cores.) Min. order 1,000 lbs. Cauthorne Paper Co., six months, 9.21 cents.

Red Stereotype Molding

No. 261—1,000 lbs., 19x24—80; rolls, 24 ins. wide (3-inch iron cores.) Min. order 1,000 lbs. Cauthorne Paper Co., six months, 9.21 cents.

Oiled Manila Tympan

No. 262—15,000 lbs., 24x36—approximately 200; rolls, 38 and 48 ins. wide; 10-inch diameter; wound on wooden plugs; 1½-inch hole. Min. order 5,000 lbs. Bids rejected.

Plate-Wiping, for Embossing Presses

No. 263—4,000 lbs., 24x36—100; rolls, 24 ins. wide (3-inch iron cores.) Min. order 1,000 lbs. Barton, Duer & Koch Paper Co., six months, 6.50 cents.

Back-Lining, for Case-Making Machines

No. 264—2,000 lbs., 24x36—180; rolls, 24 ins. diameter, 37 ins. wide, (3-inch iron cores.) Min. order 2,000 lbs. Mathers-Lamm Paper Co., six months, 3.32 cents.

High-Finish Red Sulphite

No. 265—15,000 lbs., flat, 24x36—320 and 400; in wrapper bundles. Min. order 5,000 lbs. Reese & Reese, last quarter 1934, 6.00 cents; first quarter 1935, 6.25 cents.

High-Finish Sulphite Manila Tag

No. 271—100,000 lbs., 24x36—160 to 280; flat, cut any size, min. width 24 ins., max. width 38 ins., in wrapped bundles. Whitaker Paper Co., last quarter 1934, 4.77 cents; first quarter 1935, 5.02 cents.

Calendered Tag, Manila and Colored

No. 276—700,000 lbs., manila, 22½x28½—approximately 148; rolls, 23¼ and 26½ ins. wide (6-inch iron cores). (Note—A small quantity of this lot may possibly be ordered of a thickness slightly in excess of that specified.) Barton, Duer & Koch Paper Co., six months, 7.00 cents.

No. 277—50,000 lbs., blue, brown, green, pink, red, salmon and yellow, 22½x28½—approximately 148; rolls, 23¼ and 26½ ins. wide (6-inch iron cores.) Min. order, one color, 10,000 lbs. (Note—Bidders must furnish evidence showing the success of manufacturer in previously supplying satisfactory stock for use on tabulating machines.) Barton, Duer & Koch Paper Co., six months, 7.75 cents.

Jute Tag

No. 280—40,000 lbs., 22½x28½—200 and 280; flat, cut 22½x28½ ins. in wrapped bundles. Min. order, one weight, 10,000 lbs. (Note—Approximately 10,000 lbs. of the 200-lb. weight may be ordered with the grain running the 22½-inch way.) Reese & Reese, last quarter 1934, 7.00 cents; first quarter, 1935, 7.25 cents.

Manila Board

No. 281—30,000 lbs., 22½x28½—400; flat, cut 17x28, 21x32, and 22½x28½ ins., in wrapped bundles with projecting colored-paper marker between each 100 sheets. Min. order 10,000 lbs. Reese & Reese, last quarter 1934, 3.92 cents; first quarter, 4.17 cents.

Railroad Board, White and Colored

No. 302—30,000 sheets, white, flat, 22x28 ins., 4-ply, each 100 sheets fully banded, packed in wooden cases. Min. order 10,000 sheets. Whitaker Paper Co., six months, $25.46.

No. 303—10,000 sheets, white, flat, 22x28 ins., 8-ply, each 100 sheets fully banded, packed in wooden crates. Min. order 5,000 sheets. Whitaker Paper Co., six months, $37.59.

No. 304—15,000 sheets, white, flat, 22x28 ins., 14-ply, each 50 sheets fully banded, packed in wooden cases. Min. order 5,000 sheets. Whitaker Paper Co., six months, $58.25.

No. 305—20,000 sheets, ash, gray, blue, buff, green, lemon and orange, flat, 22x28 ins., 4-ply, each 100 sheets fully banded, packed in wooden cases. Min. order, one color, 5,000 sheets. Whitaker Paper Co., six months, $31.04.

Wood Bristol, Colored

No. 306—20,000 lbs., buff, 22½x28½—150; rolls 20 and 22 ins. wide (6-inch iron cores.) Reese & Reese, last quarter 1934, 4.85 cents; first quarter 1935, 5.10 cents.

No. 307—50,000 lbs., blue, buff, gray, green, melon, pink, quaker-drab, and yellow; flat, 21x31—204; in wrapped bundles of 500 sheets each, with projecting colored-paper marker between each 100 sheets. Reese & Reese, last quarter 1934, 4.85 cents; first quarter 1935, 5.10 cents.

No. 308—100,000 lbs., blue, brown, buff, gray, green, melon, pink, and yellow, 22½x28½—200; rolls 20 ins. wide (6-inch iron cores.) Reese & Reese, last quarter 1934, 4.85 cents; first quarter 1935, 5.10 cents.

No. 309—100,000 lbs., blue, brown, buff, gray, green, melon, pink and yellow, 22½x28½—200; rolls 20 ins. wide (6-in. iron cores). Reese & Reese, last quarter 1934, 4.85 cents; first quarter 1935, 5.10 cents.

No. 310—20,000 lbs., 22½x28½—200; flat, cut 12x18 and 14½x17½ ins., the grain to run lengthwise of the sheet, in wrapped bundles with projecting colored-paper marker between each 100 sheets. Reese, last quarter 1934, 4.85 cents; first quarter 1935, 5.10 cents.

U. S. Postal Card Bristol

No. 325—5,000,000 lbs., 22½x28½—188; rolls 33 ins. wide and 34 in. in diameter (6-in. iron cores). (Note—Approximately 50,000 lbs. of 24½ and 27½-inch rolls may be ordered.) Whitaker Paper Co., one-half and R. P. Andrews Paper Co. one-half; last quarter 1934, 4.25 cents; first quarter 1935, 4.50 cents.

Pressboard, Colored

No. 351—10,000 sheets, red, flat, 22x32 ins., thickness .0140 inch. Min. order 5,000 sheets. Walker Goulard & Plehn Co., six months, $5.36.

No. 352—10,000 sheets, gray, flat, 30x36 ins., thickness .0300 inch. Min. order 5,000 sheets. Bids rejected.

News Board

No. 360—2,000 lbs., flat, 26x38 ins., No. 100. (To be trimmed square on four sides.) Min. order 1,000 lbs. Mathers-Lamm Paper Co., six months, 1.975 cents.

Chip Board

No. 361—500,000 lbs., 26x38 ins., No. 50; flat, cut 21½x32½, 24½x38, 26x38, 28½x34½, and 32½x42½ ins. Cawthorne Paper Co., six months, 1.718 cents.

Marble Grained Lined Board

No. 362—15,000 lbs., 26x38 ins., No. 50; flat, cut 22-x32 ins. Whitaker Paper Co., six months, 4.54 cents.

Strawboard

No. 363—10,000 lbs., flat, 26x38 ins., No. 50. No bids.

Lined Chip Board

No. 364—5,000 lbs., flat, 26x38 ins., No. 50. Martha Lamm Paper Co., six months, 2.345 cents.

Lined Box Board

No. 365—36,000 lbs., 26x38 ins., No. 40; flat, cut 24½-x34 ins. Min. order 36,000 lbs. Virginia Paper Co., six months, 2.291 cents.

Binders Board, No. 1 Quality

No. 366—250,000 lbs., flat, to trim 25x30 ins., Nos. 16, 18, 20, 25, 30, and 40. Martha Lamm Papers Co., six months, 3.45 cents.

No. 367—40,000 lbs., 25¾x30¾ ins., Nos. 12 and 20. Flat, to trim 34x44 ins. Martha Lamm Paper Co., six months, 3.45 cents.

Binder's Board, Best Quality

No. 368—50,000 lbs., flat, to trim 20x30 ins., and 22x38 ins., Nos. 18, 20, 25, 30, 35, 40, and 45. Barton, Duer & Koch Paper Co., six months, 4.725.

Paper in New NRA Division

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934—The National Recovery Administration has announced the formation of another industrial division in its organization set up. Captain Joseph F. Battley, heretofore Deputy Administrator, will have charge of the new division as Acting Division Administrator. It will embrace the codes comprising chemicals, drugs, paints, paper and rubber in all of their various processings and forms of manufacture.

This action is in line with the policy of National Recovery Administrator Hugh S. Johnson to bring under one administrative head certain designated groups and their allied industries. In this re-classification and allocation, codes dealing with the chemical, drug and paint industries will be assigned from Division No. 3; those dealing with paper and its products, also from Division No. 3, and rubber and its products from Division No. 1. As soon as the re-classifications and groupings are completed, the existing and the new divisions created will be renumbered.

In transferring the various codes to this and other new divisions, it is the purpose of the Administration to allow the personnel that has been handling them to remain intact.

In the new division there will be approximately 138 codes, including supplemental codes. The construction code and its various industries will remain in Division No. 3 under Major George L. Berry.

Captain Joseph F. Battley, named as Acting Division Administrator, is a graduate of the Harvard University School of Business Administration and of the Army Industrial College.

Among his military assignments have been that of Executive Officer of the Chemical Warfare Service at the Edgewood Arsenal, Edgewood, Md., and Executive Officer of the New York and Pittsburgh Procurement Service. He was on duty in the office of the Assistant Secretary of War in Washington when, in July, 1933, he was borrowed for service with the National Recovery Adminstration, where he has since been on duty.

He has recently been Deputy Administrator in charge of the Chemical Section of Division No. 3, under Division Administrator Major George L. Berry.

British Paper Market Brisk

Trade in the British paper market is fairly brisk, according to a recent report from Consul Alfred Thomson, Manchester. Although imports of all classes of paper and paper goods continues to increase, as compared with a year ago, the demand in the home market has so much improved that these foreign products are being readily absorbed, and the majority of the local mills continue full production. Another feature is the increasing demand for British papers from overseas markets. Prices, on the other hand, are much less satisfactory. They are reported to be far too low, when the higher cost of raw materials is considered, with the result that despite the better volume of business the industry is far from prosperous.

Mathieson A Member of TAPPI

The Technical Association of the Pulp and Paper Industry is pleased to announce another contributing member—The Mathieson Alkali Works, Inc. While Mathieson is well-known as a pioneer producer of liquid chlorine and other chemicals for the paper industry, it may be of interest to review the high lights of the company's progress since it was first established in 1892.

Veteran paper makers will recall that up until the late "nineties" all bleach used in this country was imported. Even after the first commercial production of bleaching powder was started in 1896 at the Niagara Falls plant of Mathieson, there existed a prejudice against the domestic product based on a mistaken idea that it was inferior to imported bleach. When consumers finally realized that this new domestic bleaching powder was as good or better than they had been getting from abroad, it was not long before Mathieson's production at Niagara Falls had to be expanded to double and treble the capacity of the original.

When liquid chlorine was first introduced in commercial quantities about 1909, the importance of bleaching powder, of course, started to decline. It was not until the World War, however, that the shipment of liquid chlorine in large quantities was attempted. The enormous demand for chlorine for war gas purposes led to greatly increased production and to the development of special container equipment for transporting the liquefied gas in quantity. Paper makers are familiar with the Multi-Unit Chlorine Gas Tank Car developed by Mathieson engineers at that time and with the long struggle between Mathieson and the carriers before this special car was finally accorded a tank car rating by the Interstate Commerce Commission and was then made available by Mathieson to all other chlorine producers.

No story of the earlier days of domestic pulp bleaching would be complete without mention of James H. ("Uncle Jimmy") MacMahon. Associated from the beginning with the technical phases of the manufacture and application of bleach in this country, he has had a prominent part in the progress of pulp bleaching both with bleaching powder and with liquid chlorine. Although now on the inactive list, Mr. MacMahon's experienced counsel on technical problems is still available, while the work he so ably started is being carried forward by Walter L. Savell, Hoke Martin, and others of the Mathieson staff.

Early in 1934, work was begun on a new Southern plant at Lake Charles, La., which is to be the most up-to-date alkali producer in the country. This, with the present Mathieson plant at Saltville, Va., will place the company in an excellent position to serve consumers in the South and Southwest. It is expected that the new Lake Charles plant will start operations about January 1, 1935.

Another recent development of particular interest to paper mills using liquid chlorine is the Mathieson Automatic Vacuum Break, which is now available to all consumers. By the use of this simple and foolproof device in the chlorine supply line, all danger of "sucking back" of solutions into the supply line and into chlorine containers is automatically eliminated.

In addition to the main sales office at New York, Mathieson maintains branch sales offices at Chicago, Charlotte, Cincinnati, Philadelphia and Providence.

T. Desiderio Visits West Indies

Thomas Desiderio, treasurer of the Clifton Paper Board Company, of Clifton, N. J., has just left with a party of friends in the paper trade on an extended tour, including Bermuda and the West Indies.

Obituary

Gavin W. Young, Sr.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 3, 1934—One of the pioneers in the paper industry of Wisconsin, Gavin W. Young, Senior, died August 31 at his home at Neenah, Wis., at the age of 74 years. He had been in ill health for the past three years, but the end was caused by pneumonia.

Mr. Young was president of the Edgewater Paper Company, Menasha, Wis. at the time of his death. He was born at Cleveland, Ohio, December 25, 1859, and came to Neenah at the age of seven years with his parents. After completing his education, he began working for the Patten Paper Company, which then operated the mill at Neenah now known as the Neenah Paper Company. He also worked at the Patten mill at Appleton, Wis. Later he went to Stevens Point, Wis., where he helped in the establishment of the Whiting-Plover Paper Company, as an associate of the late George A. Whiting of Menasha, Wis. He became the first superintendent of the Nekoosa-Edwards Paper Company at its mill at Nekoosa, Wis., and then moved to Alexandria, Ind., where he was associated with the late Samuel A. Cook in the S. A. Cook mill.

When Mr. Cook later purchased the Menasha Paper Company mill at Menasha, Wis., Mr. Young returned to Menasha and became its superintendent. He held this position until 1914 when he and S. H. Clinedinst purchased the mill and established the Menasha Printing Company. This concern is now known as the Menasha Products Company, and has been owned for a number of years by the Marathon Paper Mills Company. It developed into one of the largest carton printing concerns in the country. Mr. Young sold his interest in 1916 and founded the Edgewater Paper Company, serving as its president continuously until his death. He was prominent in civic, church and fraternal circles of Neenah and Menasha.

The survivors are a daughter, Mrs. J. P. Coyle, of Toronto, Canada, and two sons, J. D. Young and Gavin W. Young, Jr. Burial took place at Neenah.

Frederick W. Thompson

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Me., September 4, 1934 — Frederic W. Thompson, aged 62, manager of the department of insurance for the Brown Company, for 31 years an executive of that company, first at Berlin, N. H., and then in Portland, where he had lived for the last twenty years, died at his residence, 175 Vaughan street, on Wednesday. Mr. Thompson had been in ill health for three years.

He was born in Hemingford, Quebec. He received his education in Cookshire and Montreal. On leaving school he became secretary to William H. Ives, M. P. After Mr. Ive's death, he came to the United States, becoming associated with the White Mountain Paper Company, Portsmouth, N. H. He was a member of the American Association of Certified Public Accountants, the Portland Country Club, the Economic Club and the State Street Congregational Church. His widow, Mrs. Grace Porter Thompson, and a son, Porter Thompson, are living.

Irwin W. Tapley

[FROM OUR REGULAR CORRESPONDENT]

HAVERHILL, Mass., September 4, 1934—Irwin W. Tapley, aged 74, a pioneer in the paper box manufacturing industry and well known in the paper board trade, died suddenly here Thursday of a heart attack. Mr. Tapley was among the old-timers at the meeting and dinner of New England box manufacturers held some months ago at the Hotel Commander, Cambridge, Mass.

He was born in Danvers, Mass., and was graduated from the high school in that place. He lived in Dover, N. H., a few years, where in 1893 he established the first of his factories. Later, he started another plant in Newburyport and operated them both until his retirement a few years ago. He also had a box factory in this city. The firm name was I. W. Tapley & Son.

Mr. Tapley was a prominent member of the North Congregational Church, in which he held many offices, the Haverhill Historical Society and several Masonic bodies.

He is survived by his wife, Mrs. Alice P. Tapley; two daughters, Mrs. Elizabeth Torrey, of Storrs, Conn., and Miss Dorothy Tapley, a student at Goucher College, Maryland; two sons, Robert, a publisher, of New York, and George W. Tapley, an engineer, of Zanesville, Ohio; a sister, Mrs. Ella J. Porter of Danvers, and a brother, Herbert Tapley of Danvers.

Robert L. Kraus

The death is announced of Robert L. Kraus, of Marshfield, Wis., vice president of the Consolidated Water Power and Paper Company. He passed away August 31 at his home, at the age of 79. He was vice president of the First National Bank of Stevens Point, Wis., for many years, and had also served as cashier of the First American National Bank of Marshfield.

Indiana Waxed Products Starts

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., September 4, 1934—Indiana Wax Products, Inc., has entered the wax paper product field here with a large and modernly equipped manufacturing plant at 717 Fulton street. Engaged in the exclusive manufacture of waxed paper, with a principal portion of its business in bread wrappers, the company is to operate through the middle west, according to Robert F. Jeffery, vice president. The latest machinery has been installed. About 10,000 square feet of floor space is occupied by the company. The company has printing, waxing, rewinding, slitting and machine finishing departments. Presses will print in four colors.

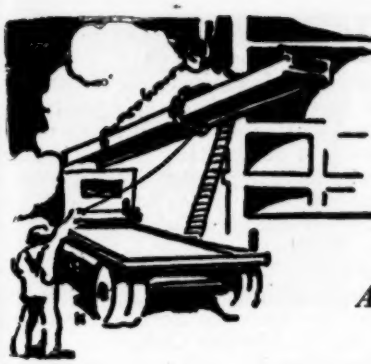
The company also will make a line of products for the jobbing trade and wholesale grocers. For the retail trade the company has two popularly priced cutter box rolls containing forty feet of waxed paper for wrapping lunches and various other domestic uses.

Besides Mr. Jeffery, other officers are W. F. Wiggins, president and Fred F. Fox, secretary and treasurer. W. F. Begley is superintendent of plant production.

British Strawboard Duty Increased

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934—A report to the Department of Commerce states that the British duty on imported strawboards has been increased from 10 to 15 per cent on unlined board and from 15 to 20 per cent on lined boards ad valorem, by an order of the British Treasury effective August 26, acting upon recommendations of the Import Duties Advisory Committee. These rates are those of the general tariff, applying to imports from countries outside the British Empire. Imports from Empire sources continue duty free.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Peshtigo, Wis.—The Badger Paper Mills, Inc., manufacturer of waxed and other processed papers, has approved plans for new addition to plant, to be two-story, steel and concrete type. Superstructure will soon be placed under way. New unit will be used for waxing division at the mill. No estimate of cost has been announced.

Turners Falls, Mass.—The International Paper Company, 220 East 42nd street, New York, N. Y., has work under way on improvements at its Montague Mill, Turners Falls, including building alterations, as well as equipment betterments. The plant was closed down last spring, and it is reported that early resumption of operations is planned. The mill gives employment to about 200 workers.

Chicago, Ill.—The Jasper Hunt Manufacturing Company has been consolidated with the Fidelity Paper and Manufacturing Company, 411 South Wells street, and name changed to that of the latter organization.

Longview, Wash.—The Weyerhaeuser Timber Company, Pulp Division, is planning an expansion program at local sulphate pulp mill, including new addition to present buildings and installation of equipment to develop an increase of about 175 tons per day. New unit is reported to cost over $100,000, with equipment.

Hopewell, Va.—The Hummel-Ross Fibre Corporation has awarded a contract to the Combustion Engineering Company, 200 Madison avenue, New York, N. Y., for installation of two new chemical waste-heat recovery units at local mill, each about 50-ton capacity, with auxiliary equipment. Work will be placed under way at early date.

New York, N. Y.—Hess & Densen, Inc., 129 West 20th street, manufacturer of paper boxes and containers, has leased space in building at 655 Sixth avenue, and will occupy for local plant, including storage and distributing facilities.

Los Angeles, Cal.—Boxes & Paper, Incorporated, recently organized with capital of $10,000 by Indiana interests, is said to be planning early operation of local plant for manufacture of paper boxes and containers of various kinds. New company is headed by Harry H. and Lee R. Lindley, both of Marion, Ind., and is represented by Robert W. Crasher, Glass Building, Marion.

Oshkosh, Wis.—The Oshkosh Corrugated Box Manufacturing Company, Harrison and Murdock streets, manufacturer of corrugated boxes and containers, has approved plans for new addition to plant, and will proceed with superstructure at once. It will be two-story, 92 x 100 feet, designed to replace in part two old buildings and increase present floor space about 50 per cent for larger output. General contract has been let to Fluor Brothers & Smith, 48 Otter street. New unit will cost over $25,000, with equipment. John Orlebeke is president.

Holyoke, Mass.—The new tissue paper plant to be operated by Floyd R. Graham in former mill of the New York and New England Company, Ely street, recently referred to in these columns, will be known as the Graham Manufacturing Company. New organization is capitalized at $40,000. Mr. Graham will be president and treasurer.

New York, N. Y.—The Diamond Products Distributing Corporation, a Delaware corporation, has filed notice of organization to operate in New York, for distribution and sale of paper and pulp products, with capital of 2500 shares of stock, no par value. Local offices will be at 150 Broadway. B. A. Bartlett is secretary.

Jersey City, N. J.—The Gotham Card and Paper Company, 41 Oakland avenue, has begun remodeling and improving the three-story factory at 16-18 Hopkins place, recently purchased, as previously reported in these columns, and will have the structure ready for occupancy early in the fall. Present plant will be removed to new location and capacity increased. A new garage and service building for company motor trucks and cars will be erected. Abraham Davis, 140 Montgomery street, is architect.

Combined Locks, Wis.—The Combined Locks Paper Company, Appleton, Wis., has let general contract to Fluor Brothers & Smith, 48 Otter street, Oshkosh, Wis., for improvements in mill at Combined Locks, including new roofing deck in main plant and other work. Program will be placed under way at once.

Boston, Mass.—The James J. Graham Paper Company, 25 Otis street, Cambridge, has leased adjoining three-story building at 27 Otis street, and will occupy at once for expansion, including storage and distribution.

Millinocket, Me.—The Great Northern Paper Company is said to have completed plans for new hydroelectric generating plant for service at mill, recently referred to in these columns, and will proceed with project at early date. The H. J. Deutschbien Company, Inc., 350 Fifth avenue, New York, N. Y., is consulting engineer, in charge.

Trenton, N. J.—The Executive Authority, Pulp Division, Paper and Pulp Industry, has given recognition to Trenton as a port for the importation of wood pulp and paper products. It is estimated that in normal times, close to 40,000 tons of such materials will be handled at the Port of Trenton annually; present importations are estimated to approximate about 27,000 tons per year.

New Companies

Boston, Mass.—Wormstead, Smith & Loomis, Inc., has been chartered with capital of $15,000, to deal in paper products of various kinds. Robert W. Wormstead is president; Hubert H. Loomis, treasurer, and Clarence

H. Smith, 311 Atlantic avenue, Boston, treasurer and representative.

New York, N. Y.—The Main Paper Stock Corporation has been incorporated with capital of $20,000, to deal in paper goods. Incorporators of new company include Lee Joskow, 324 East 145th street, Bronx, and Samuel Mavers, 700 West End avenue, New York.

Chicago, Ill.—The Dura-Flex Company, 255 East 95th street, has been incorporated with capital of 100 shares of stock, no par value, to manufacture and deal in processed papers, including stencil papers, etc. The incorporators are Paul A. and Harry C. Gollnick.

New York, N. Y.—A. Fortgang, Inc., has been incorporated with capital of 100 shares of stock, no par value, to deal in paper products of various kinds. The new company is headed by A. and Henry Fortgang, and Morris Fortgang, 345 East 77th street, New York.

Jacksonville, Fla.—The Arnold Printing & Label Company has been incorporated with capital of $10,000, to operate a local paper converting plant for manufacture of paper labels and kindred products. New company is headed by C. L., J. R., and R. T. Arnold, 3418 Riverside avenue, Jacksonville.

Kalamazoo, Mich.—The Pound Paper Processing Company has been chartered with capital of 50,000 shares of stock, no par value, to manufacture special paper products. George Pound, 114 North Burdick street, Kalamazoo, heads the company.

Chicago, Ill.—The American Litho Arts, Inc., 328 South Jefferson street, has been incorporated with capital of 20 shares of stock, no par value, to manufacture and deal in paper products. The incorporators are Bernhardt C. Rudi and Frank P. Draffkorn.

New York, N. Y.—The Transparent-Wrap Machine Corporation has been incorporated with capital of $100,000 and 2500 shares of common stock, no par value, to manufacture special wrapping equipment for transparent paper stocks. New company is represented by Amend & Amend, 135 Williams street, city.

Gummed Products Opens Branch Warehouse

To meet the increasing demand for Trojan Gummed Paper and Sterling Tread Gummed Tape in and around the New England States, the Gummed Products Company, Troy, Ohio, has opened a branch warehouse in New York city.

The warehouse will be located in the Port Authority Commerce Building, Room 857-111 Eighth avenue, New York, N. Y. Telephone No. Chelsea 2-7391.

J. F. Cella, in charge of the New York branch sales office, will also be in charge of the warehouse. For the purpose of close supervision, the location of the sales branch has been transferred from 207 East Broadway to the same address as the warehouse.

Representative stock of Trojan Gummed Paper, Trojan Box Tape and Sterling "Tread" Gummed Sealing Tape will be carried at all times to meet the immediate needs of their customers.

J. Solotken & Co. Expand

INDIANAPOLIS, Ind., September 4, 1934—J. Solotken & Co., dealers in waste paper here, have leased additional warehouse space in the Indianapolis Warehouse building, 330 West New York street. Offices of the company are at 410 West North street. The new building is served by a railroad switch and is six-stories high and contains 50,000 square feet of floor space.

W. G. Clark To Be Asst. Gen. Manager

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, September 4, 1934—R. F. Burns, manager of the Auglaize Box Board Company's plant in St. Marys, which is owned by the Weston interests of this city, has been promoted to be assistant to W. G. Clark, president and general manager of the Weston properties, and has been instructed to report to Terre Haute, Ind. by November 1, to become the assistant general manager.

During his residence in St. Marys he has been active in community enterprises including the Western Ohio Fish and Game Association, the American League, the Republican committee and the St. Marians Club.

With his family, including his wife and two children, he will move from St. Marys to Terre Haute, where the Weston interests own and control mills, some time within the next two months.

Paper Trade Committee

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934—National Recovery Administrator Hugh S. Johnson has announced his approval of a plan submitted by the Code Authority for the paper distributing industry whereby adjustment of trade practice complaints arising under the code will be handled by a committee of eight members.

The following persons constitute the committee: Arnett W. Leslie, Minneapolis, Minn.; O. F. Marquardt, New York City; S. L. Wellhouse, Atlanta, Ga.; R. S. Bull, Chicago, Ill.; C. A. Esty, Boston, Mass.; O. G. Kerwin, St. Louis, Mo.; T. J. Nagel, Hollis, N. Y.; and H. B. Finch, Minneapolis, Minn.

May Reopen Manitoba Mill

MONTREAL, Que., September 4, 1934—The Manitoba Pulp and Paper Company has awarded contracts for cutting by settlers of 50,000 cords of pulp wood in Manitoba. The contracts will involve an expenditure of about $500,000 and prices paid settlers will be on an average of $1 per cord higher than that paid last year, when contracts were given for 20,000 cords. It is reported that there is a possibility of the newsprint mill of the Manitoba Pulp and Paper Company, which is controlled by the Abitibi Power and Paper Company, resuming activities next year.

Master Appointed in A. W. P. Case

Charles F. Lovejoy, assistant attorney general of Massachusetts, has been appointed by the Federal Court to sit as master in the action instituted by the Holyoke Water Power Company against the American Writing Paper Company, Holyoke. Last noted company is arranging for reorganization under the new Federal bankruptcy law amendment, and the water power company has secured court permission to intervene in such reorganization proceedings.

G. Z. Guinard Made Superintendent

Holyoke, Mass., September 4, 1934—George Z. Guinard of South Hadley Falls has been appointed superintendent of the newly organized Graham Manufacturing Company which will get under way in a few days in the manufacture of tissue paper specialties. Mr. Guinard worked with Mr. Graham as master mechanic when the two were employed at the American Tissue Mills Inc.

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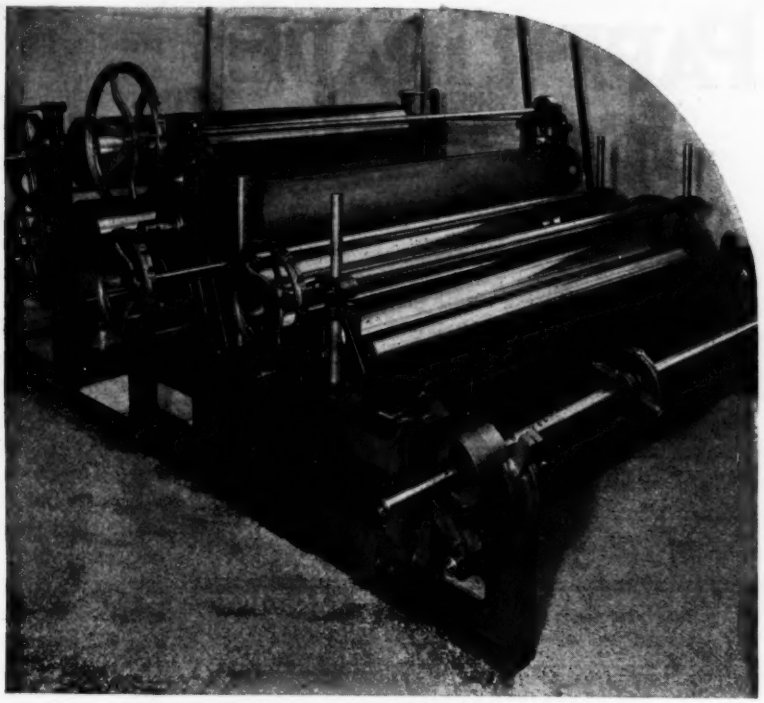

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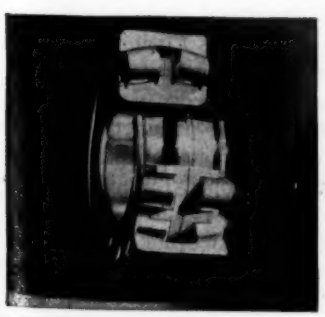

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PAPER TRADE JOURNAL
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COMING EVENTS

Technical Association of the Pulp and Paper Industry, Fall meeting. Headquarters Multnomah Hotel, Portland, Ore., September 10-13, 1934.

Paper and Pulp Section, National Safety Council, annual convention, Hotel Statler, Cleveland, Ohio, October 1-5, 1934.

PAPER EXPORTS INCREASE ONE-THIRD IN FIRST HALF YEAR

Exports of paper and paper products from the United States during the first six months of 1934 exceeded in value those of the corresponding period in 1933 by more than one-third, according to the Forest Products Division of the Department of Commerce. Most items shared in this increase, exceptions being confined principally to boards and board products. Even in this group wall board shipments increased 22 per cent in volume and vulcanized fiber 34 per cent. Boxboard shipments were about on a level with last year's, but other classes of board, with the exception of bristols, declined 4 per cent and boxes and cartons 13 per cent. Exports of bristols and bristol boards were larger by 37 per cent. In the fine paper group, exports of book papers (uncoated) increased by only 7 per cent and of surface-coated papers by 9 per cent, but writing paper shipments were greater by 26 per cent and tissues and crepes by 31 per cent.

Exports of newsprint, which have shown a strong upward trend this year, show a rise of 13 per cent over the first six months' shipments of 1933. Except for greaseproof and waterproof papers, shipments in the wrapping paper group were consistently larger than during last year, ordinary wrapping papers having rose by 56 per cent and over-issue newspapers (used in the Far East as a substitute for wrapping papers) 45 per cent. Paper bag shipments increased 12 per cent. Shipments of paper and paper products during the first six months of 1934 were valued at $8,889,553 as against $8,054,382 during the preceding six months and $6,543,439 during the first half of 1933.

In addition to the above, paper base stocks to the value of $2,863,137 were exported from the United States during this period, this amount representing an increase of 84 per cent in value over the corresponding period in 1933. Increases occurred principally in such items as sulphite wood pulp, which increased 33 per cent, and rags and other waste, which was larger by 146 per cent.

Imports of paper base stocks into the United States were also substantially higher than last year, exceeding those for the corresponding six months in 1933 by 44 per cent. This rise in value, however, is not only due to the increase in volume of shipments but also to the higher average price per ton paid for wood pulp and waste used in paper making. This is particularly noticeable in the sulphite group, where an increase in volume of 14 per cent recorded for unbleached sulphite and 17 per cent for bleached sulphite is accompanied by increases in value of 30 per cent and 35 per cent, respectively. Imports of kraft pulp (unbleached sulphate) increased by 28 per cent in volume and 37 per cent in value and imports of ground wood 16 per cent and 28 per cent, respectively. Rags and other paper stocks increased 13 per cent in volume and 72 per cent in value. In contrast to the other items, the average value per cord of pulpwood was somewhat less this year, the volume of shipments showing an increase of 61 per cent while the value increased only 56 per cent. Of the total imports of paper base stocks valued at $30,748,905, $1,771,211 represented 259,963 cords of pulpwood, $27,838,170/724,342 tons of wood pulp and $1,139,524/38,693 tons of rags and other waste.

Newsprint receipts, which account for nearly 90 per cent of the total importations of paper, rose from 696,326 tons valued at $30,725,478 to 948,842 tons valued at $36,566,654. This, it will be noted, is an increase of 36 per cent in volume, but only 19 per cent in value. Imports of other classes of paper and board for the six months' period were valued at $5,204,706, an increase of 22 per cent over similar receipts during the first half of 1933.

PRESERVATION OF RECORDS

The results of systematic studies at the National Bureau of Standards, extending over a period of four years, of the problems of preserving valuable records in libraries, were summarized in a report presented by B. W. Scribner at a meeting of the American Library Association, in Montreal, June 28. The report was given at a session of the Association's Public Documents Committee, which is giving particular attention to this important subject.

The bureau studies on the relation of light, adverse temperature and humidity, acidic pollution of the air, and low-grade paper to deterioration of paper in libraries were described and means developed for minimizing deterioration from these causes were explained. These studies were made with the assistance of a fund granted by the Carnegie Foundation to the National Research Coun-

cil, and had to be discontinued because of the depletion of this fund and that of the bureau available for the purpose. A resume of the results obtained was published in the July Library Quarterly and a detailed summary is contained in the Bureau Miscellaneous Publication No. 144. The following were mentioned as problems which should be studied to round out the partial information already obtained: the elimination of odors and the efficacy of air filters in purification of air; the kind of light rays most harmful to paper and means of eliminating such rays in library illumination; protective and reproductive processes for records contained on impermanent papers; the establishment of international standards for record papers; prolonging the life of the lower-grade papers by incorporated materials; the effect of acidity from perspiration; the causes of "foxing" and molding of paper; and the repair of books, manuscripts and other forms of records.

Inspects International Envelope Plant

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, September 4, 1934—Steady increase in the postal business throughout the United States was reported the past week by Clinton B. Eilenberger, third assistant postmaster general, who inspected the plant of the International Envelope Corporation here.

In making the inspection, Mr. Eilenberger was accompanied by Major J. J. O'Connell, head of the Dayton plant; W. W. Barre, government agent stationed at Dayton and Congressman Byron B. Harlan, Dayton, representing the Third District.

Mr. Eilenberger reported that the activities of the Dayton envelope plant had increased materially during the past year. Proof of the increase in business was shown in the fact that the plant is now running five days a week, employing approximately 700 persons, compared with 450 persons two or three days a week last year.

The assistant postmaster general commended the officials and employees of the Dayton company upon the efficient manner in which they were handling the stamped envelope contract, which still has two years to run.

Mr. Eilenberger spent a short time with the employees of the International Corporation last Wednesday afternoon at Triangle Park before leaving for Washington.

Before leaving, he commented on the fact that the reduction of airmail from 8 cents to 6 cents an ounce had materially boosted the income of that branch of the Postoffice department.

Westminster's Earnings Improve

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 4, 1934—From Vancouver it is announced that the Westminster Paper Company, operating a specialty plant at New Westminister, B. C., is showing further earning improvement this year. The first half of the fiscal year, which ended July 31, showed gains over the like period of the previous year and this improvement is being maintained. In addition to meeting all charges on a $300,000 issue of 6½ per cent first mortgage bonds, the company has been paying 4 per cent annum in dividends on 47,789 common shares since October 1, 1932. This company, as at July 31, 1933, was in good working capital position with $169,003 in current assets, and $59,885 in current liabilities, leaving net working capital at $100,118.

Disclosure of Confidential Information to Code Authority

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934—The National Recovery Administration has announced issuance of an interpretation, requested by the paper bag manufacturing industry, of a provision in that industry's code relating to the disclosure of confidential information to the Code Authority.

Complaint was filed by the Code Authority against a member of the industry for having failed to file with the executive authority complete details of all alleged bona fide contracts existing on the effective date of the code.

The industry member replied that members of the Code Authority were his competitors in business, and that compliance with the code provision would mean revealing confidential business relations with his customers.

The question presented upon this basis of facts was: "Is such confident information available to members of the Code Authority without restriction and subject to inspection by them upon request?"

The interpretation follows:

"It is not considered that this provision of the Code authorizes, or is intended to authorize such an inspection by the Code Authority such as an inspection by members of the Code Authority who are also members of the industry and actual or potential competitors of the member filing the contracts or giving the information. No member of the industry should be penalized or endangered by compliance with code provisions.

"It is ruled that the member must file the appropriate information upon demand of the Executive Authority but that such information is to be filed with the secretary and by him held in confidence without disclosure except as herein provided.

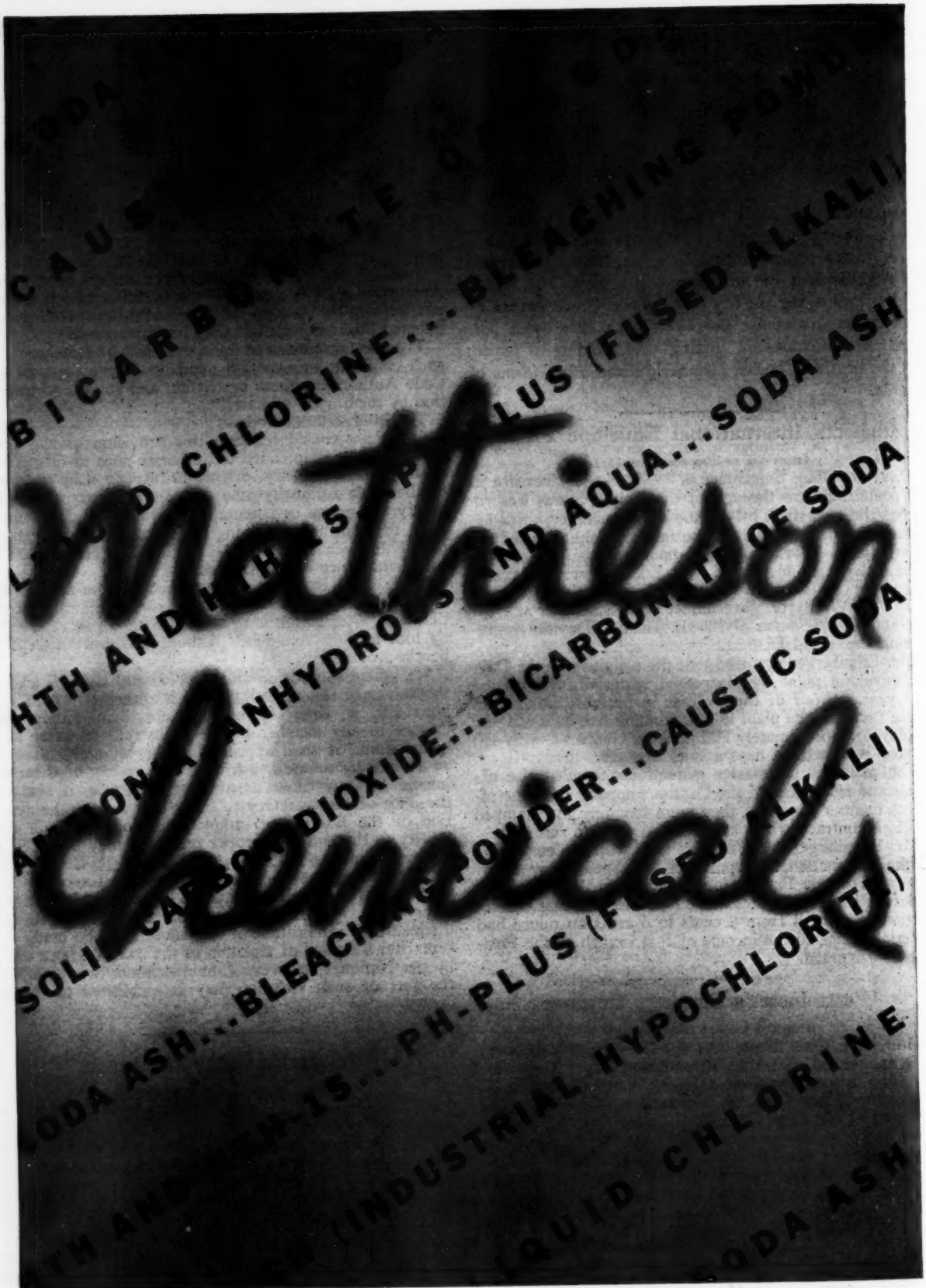
"If upon examination and after competent legal advice, the secretary is satisfied that such contracts are in fact bona fide, he shall continue to hold them without disclosure to any member of the industry. If, after such examination, it shall appear, and the secretary shall be so advised by counsel, such contracts, or any of them are invalid for any cause or are not bona fide, it shall be the duty of the secretary to bring that fact to the attention of the Executive Authority and/or the Code Authority to the end that proper measures may be taken to secure compliance with the provisions of the Code.

"Members of the Code Authority and/or Executive Authority to whom such information is disclosed by the secretary shall treat the same as confidential and no further disclosure or publication of the same shall be made except after a finding of violation of the code has been made by the National Recovery Administration, at which time the fact of such violation may be published to the industry."

Newsprint Gains in Sweden

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934—Newsprint production in Sweden during the month of June totaled 18,288 metric tons, an increase of nearly 2,000 tons over the production for June of last year, when the total was 16,287 tons. The output for the first six months of the current year is slightly greater than for the corresponding six months in 1933, the figure for the former period attaining 118,555 tons and for the latter 114,357 tons. Exports of newsprint, according to official figures, during June amounted to 15,375 tons, bringing the total for the first six months up to 93,973 tons as against 83,966 tons last year.



The **MATHIESON ALKALI WORKS (*Inc.*), 250 PARK AVENUE, NEW YORK, N. Y.**

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

A.C.S. Division of Cellulose Chemistry Papers

Following are the abstracts of papers to be presented at the meeting of the Cellulose Division of the American Chemical Society, Cleveland, Ohio, September 9 to 14, 1934. C. E. Curran of the Forest Products Laboratory, Madison, Wis., is chairman of the Division.

1. Analyses of Glacial and Pre-Glacial Woods. Willis A. Gortner, S. I. Aronovsky, C. O. Rosendahl and Ross Aitken Gortner.

Five woods representing the white spruce forestation of the Northwest over 3 periods of geologic time from about 1 million years ago to the present time have been analyzed. The ash contents of the woods increased with age. The carbohydrate portions of the woods, including celluloses and pentosans, showed marked decreases with increasing age of the woods. The lignin contents increased with the ages of the woods, due mainly to the loss of celluloses and pentosans.

The Cooking Process VIII

2. The Cooking Process. VIII. Volatile Organic Acids by the Saponification of Aspen Wood. S. I. Aronovsky and Ross Aitken Gortner.

Aspen sawdust was cooked with sodium carbonate for 2 hours at 170°C. The ratio of wood to liquor and the concentration of the salt in the liquor were varied. The yields of residual woods and total organic matter in the residual liquors were obtained. The volatile organic acids were obtained as the barium salts. Decreasing the concentration of sodium carbonate results in slight decreases in the volatile acid yields. Varying the ratio of wood to liquid within the limits given in this paper had no appreciable effect. The ratio of formic to acetic acid varied from 1:5.6 to 1:9.4.

3. Spruce Holocellulose and the Composition of Its Easily Hydrolyzable Fraction. E. F. Kurth and Geo. J. Ritter.

Spruce holocellulose was isolated from extractive-free sawdust by alternate treatments with gaseous chlorine and a 50 per cent. alcohol-pyridine solution. The yield of holocellulose averaged 71.3 per cent. This spruce holocellulose contained no more than traces of lignin and contained all of the acetyl and formyl groups, the pentosans, uronic acids, and 12.2 per cent. of the methoxyl present in the extractive-free wood.

The easily hydrolyzable part removed from holocellulose by treating it with boiling 1 per cent. H_2SO_4 for 30 minutes constituted 10.3 per cent. of the weight of the initial extractive-free wood. Its percentage composition, based on the weight of the extractive-free wood, was as follows: Mannose 1.82; glucose 0.83; galactose 0.80; arabinose 1.29; xylose 2.15; CH_3O 0.33; glucuronic acid anhydride 1.50; volatile acids (formyl and acetyl groups) 0.82; undetermined 0.76.

Dark Field Study of Fibers

4. Dark Field Study of Fibers. A. T. Clifford and F. K. Cameron.

A study of fibers of cellulose, cellulose products, asbestos, iron and many other substances, with the Spierer lens, shows all fibers revealing striæ of identical dimensions. They appear to be diffraction bands from an undetermined illuminating point, but are not images of micellæ.

5. A Suggested Method for Relating Freeness and Fiber Size to the So-Called Hydration of Paper Pulps. F. A. Simmonds and C. E. Curran.

Two procedures have been developed for studying the effect of fiber size and papermaker's hydration in relation to the "freeness" or slowness" test commonly used by paper mills. In the first procedure dehydration of beaten pulp has been effected by extractions with organic solvents carried out in such manner as not to change the response of the fibers to rewetting, thereby eliminating the factor of fiber size as it affects the freeness test. In the second procedure determinations of the equivalent pore radius of wet fiber mats, produced under conditions somewhat similar to those obtaining in the freeness test, permits measurement of a structural property of these mats which possibly can be correlated with the freeness values by means of a "flow resistance" factor.

Chlorination of Lignin

6. The Chlorination of Lignin. R. L. Mitchell.

Chlorine water acting on maple lignin, isolated by the sulphuric acid method, removed approximately 90 per cent. of the methoxyl at several different temperatures. The amount of oxidation increases up to about 45°C. as measured by loss of lignin substance and yield of carbon dioxide evolved from the chlorlignin by boiling with 12 per cent. hydrochloric acid.

In the reaction of gaseous chlorine with moist lignin, increasing amounts of hydrochloric acid were formed with increase in temperature. The amount of chlorine combined with lignin varied but slightly with changes in temperature. The chlorlignins evolve HCl on standing.

The action of gaseous chlorine on lignin in the wood and isolated lignin produced the same amount of hydrochloric acid. The amount of combined chlorine was 64 per cent. greater in the lignin in wood than in the isolated lignin.

Fourdrinier Wire Factors*

By Harry G. Specht[1]

In dealing with the subject of fourdrinier wires, we wish to present certain facts which greatly influence the life of the wire on the paper machine. The fourdrinier wire is a fine and delicate product. It has a limited capacity in use. It is made of fine strands of wire that have certain limiting physical characteristics that are essential for manufacture in the weaving process.

The wire becomes the mould for the formation of the sheet. If the sheet leaves the wire as a poor sheet of paper, then ideal conditions on the rest of the machine will not transform it into a good sheet. The web of wire acting as the mould, also is expected to drive all the rolls on the wet end, overcome the resistance of the suction boxes, bear the grief of the abrasion of the clay and fillers, withstand acid and corrosive condition, be subject to the whims of the human element in regard to tension, and, in general, overcome the braking effects of doctor blades, poor bearings, long aprons and similar factors.

Therefore, keeping the rolls in alignment, free turning and free of braking effects and making good arcs of contact on the bearing, stretch and guide rolls, help materially in affecting wire life.

An average wire travels from 20,000,000 to 30,000,000 feet during its life. Sheets varying from 15 to 150 pounds are made on the same wire. Speeds vary from 100 to 1600 feet per minute. Water and stock conditions vary somewhat. With close to 1000 paper machines in this country, only 50 machines are duplicates, one with another, and these vary in speed and mesh of wire used. Therefore, the fourdrinier wire becomes a custom-built product, each wire being built to satisfy the peculiar operating conditions of each machine. Standards cannot be practically set due to varying machine conditions.

In view of the above variables and factors, let us refer to Fig. 1. (A) is an enlarged cross section of a worn warp wire of an 80-mesh wire. The total wire diameter is .0067. When half worn through, the wire life is about used up. (B) is a human hair magnified to the same diameter as the wire. Note the comparison. The wearing life of an 80-mesh wire is not much greater than the total diameter of a human hair. A 60-mesh wire has the wearing life of one and a half diameters of such hair.

We present this common comparison to illustrate how fine a fabric the wire is. As demonstrated in the second paragraph, this fine belt is expected to do the work of carrying the sheet, drive the machine rolls and overcome suction, abrasion, and carry other burdens. By analyzing these factors, it seems certain wire life can be increased through the proper control of them.

To properly analyze the various factors, we wish to present certain data, as a means of interpreting these factors later on.

* Presented at the meeting of the New England Section of the Technical Association of the Pulp and Paper Industry, Holyoke, Mass., May, 1934.

[1] Vice-President and General Manager, Eastwood-Neally Corporation, Belleville, N. J.

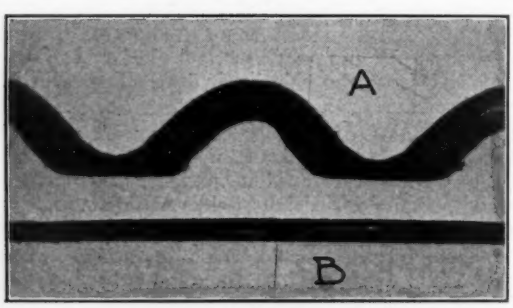


FIG. 1

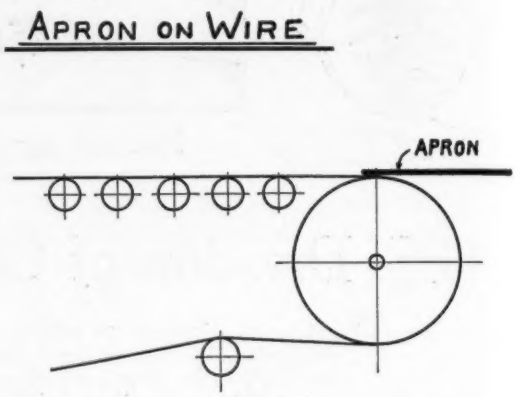


FIG. 2

Warp Wire Wear

In Table I is tabulated the wear on the warp wire per revolution and per point of contact. These factors are so fine they almost defy human measurement. The total wear available is .0034 or one-half the diameter of the warp. Divide this by the average day's run and the wear per day is secured. If a wire averages 20 days, the wear per day is .00017. Eliminating as many points of contact as possible is one indicating factor in wire life. Each mill, taking into account the type of wire used, can determine its own operating condition and establish the basis for study of wear as interpreted through the daily wear factor.

In Table II is shown the factor of wire area available for sheet formation and the time available for such formation. A 60-foot wire and an 80-foot wire are tabulated for comparison. This table is presented to answer numerous questions raised in regard to formation and length of wire. The wire manufacturer cannot overcome, except within limits, the factors resulting from speeding up machines in relation to formation of sheet. Speeding the machine from 600 feet per minute to 100 feet on a 60-foot

TABLE I.—WEAR OF FOURDRINIER WIRES

Wire—80 Mesh, 60 feet long. Warp Diameter—.0066".
Life of Wire—10 days (warp half worn through).
Number of Points of Contact—Suction Boxes 4 Rolls, Breast 1, Couch 1, Table 32, Carrying 5, Stretch 1, Guide 1—Total 45.

Machine Speed, Ft. per Min.	Wear per Revolution, Inches	Wear per Point of Contact, Inches
200	.000000069"	.00000000153"
600	.000000023"	.00000000051"
1000	.000000014"	.00000000031"
1200	.000000012"	.00000000026"

TABLE II.—MACHINE SPEED AND WIRE LENGTH AS FACTORS IN PAPER MAKING

Machine Speed Feet per Min.	60 Foot Wire: Distance breast roll to couch roll 27 feet Time	60 Foot Wire: Distance breast roll to first suction box 20 feet Time	80 Foot Wire: Distance breast roll to couch roll 37 feet Time	80 Foot Wire: Distance breast roll to first suction box 30 feet Time
200	8.1 seconds	6.0 seconds	11.1 seconds	9.0 seconds
600	2.7 seconds	2.0 seconds	3.7 seconds	3.0 seconds
1000	1.6 seconds	1.2 seconds	2.2 seconds	1.8 seconds
1200	1.3 seconds	1.0 seconds	1.8 seconds	1.5 seconds

wire cuts the formation area time from two seconds to 1.2 seconds. Are paper mills considering their own limitations in this factor of speeding up machines, in relation to formation? One and two-tenths seconds is a short period of time. The fibers must have a certain time to form into a sheet. What is the limit of time factor in this regard? How fast can a given machine be run without sacrifice?

In Table II, the distance from the center of the breast roll to the first suction box is considered the formation area. On a 60-foot wire, this distance is approximately 20 feet. Although some men believe the real formation takes place at the suction box, the general belief is that the formation is gradual from the breast roll to the first box. Interesting experiments are being conducted in certain mills which may change some theories on paper formation that now exist.

Certain mills are considering lengthening their wires to secure longer formation area. In lengthening a wire, it must be remembered that less than one-half of the added wire length is added to the formation length. Each mill should form its own chart covering these factors and, interpret each problem on the basis of speed, available distance and mesh. Naturally, wire life is dependent upon wear per revolution which can also be reduced into wear per ton of paper produced.

In speeding up the machine, the type of wire mesh used becomes a factor, as increased speed cuts down the time of formation and time for water removal.

In Table III, we list the various meshes and number of openings per square inch. The theoretical open area is shown as well as the actual drainage or porosity factor. This drainage factor is shown in minutes, for draining a given quantity of clear water under a fixed head. This factor may change with stock conditions. It can be seen that an 80-mesh wire has approximately the same theoretical open area as a 60-mesh wire, but it has approximately seven per cent less actual drainage. The greater number of openings of smaller area increase the surface tension of the water and thus decrease the drainage of an 80-mesh wire over a 60-mesh.

TABLE III.—OPEN AREA AND DRAINAGE QUALITY OF FOURDRINIER WIRES

Mesh	Number of openings per square inch	Theoretical open area per cent	Time of drainage quality minutes
0	....	100.	...
60	2242	26.9	1.77
65	2860	25.7	1.85
70	3360	26.7	1.91
75	3900	25.8	1.95
80	4480	27.0	1.89
60 x 180 Triple chain	2968	13.3	2.05

In using finer meshes for sheet formation and by increasing speed of machine operation, if increased vacuum is necessary for water removal, wire life can be expected to decrease. Little information is available on how increased speed and vacuum affect wire life. Experiments being conducted will determine these relative factors. If by using finer meshes the density of stock can be increased, thus cutting down the amount of water to be removed per ton of paper produced, wire life might be increased due to the possibility of operating at lower vacuum on the boxes. As wear due to the suction boxes is affected by vacuum pressure, experiments conducted in individual mills will prove the possibility of increasing wire life by varying and controlling these factors.

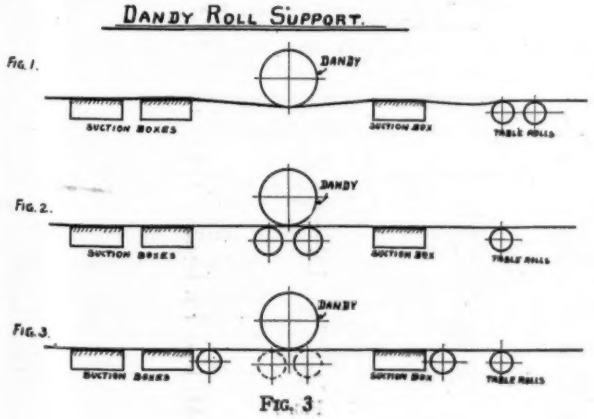


FIG. 3

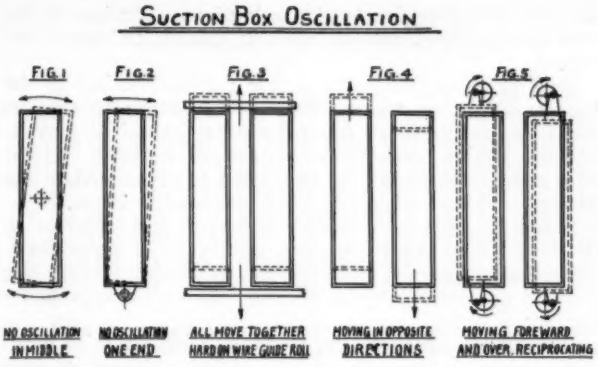


FIG. 4

The Position of the Apron

In Fig. 2, we show the placement of the apron on the breast roll. In a great many mills, the apron is permitted to rest on the wire a great deal more than is necessary, thus causing a drag on the wire, affecting wire and apron life and greatly affecting formation of sheet. In a mill using a 60-foot wire, with the apron resting two feet on the wire, 10 per cent of the formation area is lost at an important part of the wire.

With the apron stationary, and the wire below being moved by the shake, it seems reasonable that some thought can profitably be given to this part of the machine in the making of a sheet of paper. Opinion is rather indefinite among paper makers on the part the apron should play in sheet formation. But, from a wire standpoint, it is a vital factor in wire life.

The apron is used to bridge the opening between the apron board lip and the breast roll. Some of the most modern machines have so placed their apron board lip as to practically eliminate the apron itself. It has been stated that the problem of the wire is to keep the fibers in suspension as long as possible. If this is true, then the amount of apron resting on the wire is a factor in sheet formation, as wire area is lost in making for such formation.

If the apron acts as a brake on the wire, it adds to the accumulated total of all the other braking factors in requiring more pulling and driving force to drive the wet end. Saving power is a factor in this regard.

Rolls

The mounting of the rolls on the shake frame, such as table, breast and supporting rolls, can be studied for improving wire life. On many machines, the rolls are not coordinated to move the wire. The burden of moving the rolls back and forth to keep up with the shake is thrown upon the wire, instead of the rolls carrying and moving the wire. The burden of this work should not be placed upon the wire. Keep in mind Fig. 1. Many wires

run into wrinkles due to the lack of coordination of the rolls on the shake frame. This is evident on many machines.

In Fig. 3, we show the dandy roll in relation to the suction boxes. It seems to be good practice to support the dandy roll between two table rolls, instead of permitting the suction box edges to act as such supports. If the wire is made to deflect up and down to accommodate the dandy, cracking back of the seam is bound to occur.

Supporting the wire with a table roll just adjacent to the first box seems to be good practice. In some cases, the distance from the last table roll to the first suction box is too great, permitting the wire to deflect as it approaches the box edge.

If table rolls turn freely, and turn with the wire without slippage, table rolls are a negligible factor in wire wear. If they do not turn freely, then the wear increases with the percentage of slippage. As the wire makes only a line contact with the table rolls, it is quite apparent that it is important to keep the rolls free turning. If the table rolls are made larger in diameter and kept down in weight, the rolls will turn more freely than will small diameter rolls.

As the stretch, guide and supporting rolls are also driven by the wire, the greater the arc of contact the wire makes with the rolls, the less possibility there is for these rolls to slip and cause wire wear. The slippage on these rolls is important on machines using clay and filler, for the rolls, being constantly covered with the white water carrying abrasive materials, will wear the wire when permitted to slip in relation to the wire surface.

Suction Boxes

In Fig. 4, we show five different types of suction box oscillators. In types Nos. 1 and 2, oscillation is not uniform and a cause for uneven wear. The wires wear more at the edge than in the middle.

Type 3 will result in edge trouble, throwing too much burden on the wire guide.

Types 4 and 5 are proper in that they work for even wear and distributed movement of the boxes.

The movement of the boxes must be studied in relation to the wire guide, which is not far distant from the last box.

Fig. 5 shows three common types of suction box covers. All three designs have proven successful. The design is secondary to the relation and distribution of open area to supporting area. Type No. 1 if not properly made has most effect on wire life. Tops made of chromium-plated bronze, rubber, wood and products similar to bakelite all have their sponsors. In general, the individual mill conditions will determine the most effective type to use. A good deal of wear can be eliminated by making a study of box area to suction. In some mills, effective results

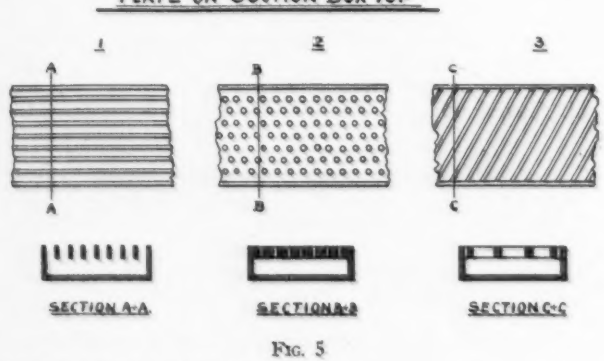


FIG. 5

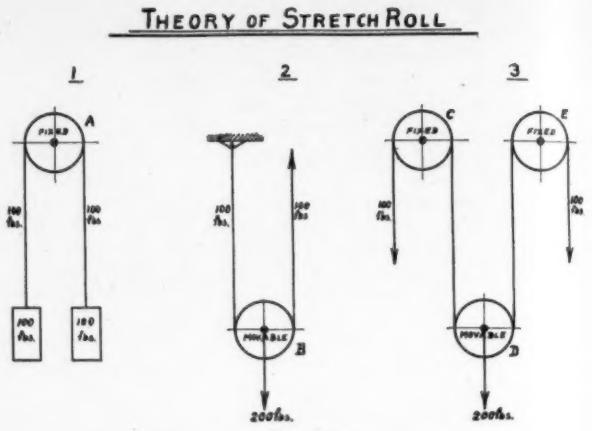


FIG. 6

have been obtained by increasing number of boxes and decreasing vacuum.

The fact that each inch of vacuum is equal to one half-pound of pressure, is the starting factor to deal with. Sheet weight and openness affect the effective pressure, but relative factors can be determined for each machine which can be made a basis for study for increasing wire life.

Wire Tension

Fig. 6 outlines some of the fundamentals of the stretch roll. The theories involved are those of the movable and fixed pulley.

The stretch roll is a vital and important part of the machine. The human equation plays an important part in this regard. Every tour boss seems to delight in changing the roll tension, just to suit personal opinion. What is the proper running tension of a wire?

It seems that it should be equal to that tension which will prevent wire slippage on the driving roll. It is greatest between the last suction box and the couch roll. It is least between the last supporting roll and the breast roll. The greatest tension is equal to the accumulated braking forces of suction boxes, roll friction and stock load. In No. 3, we note that the tension in the cable is equal to 100 pounds. A 200-pound load at "D" will maintain a 100-pound tension in the cable.

Fig. 7 illustrates the application of this theory to the stretch roll. As the angle changes between the horizontal and the wire from the stretch roll to the supporting roll (the angle alpha indicating such angle) the pressure "P" necessary to maintain a given tension "T" in the wire be-

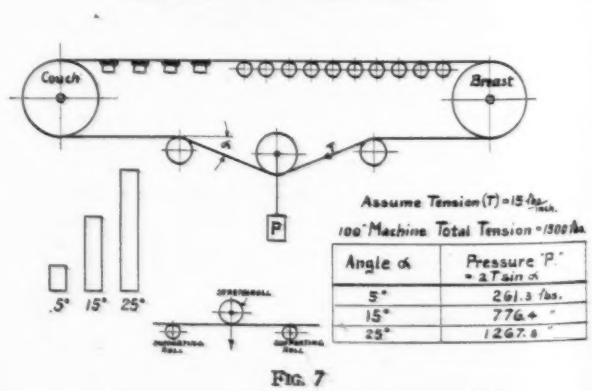


FIG. 7

comes greater as the angle alpha becomes greater. This is shown graphically by representing the columns as weights for 5 degrees, 15 degrees and 25 degrees. The table gives the value of "P" for similar angles to maintain a tension of 15 pounds per inch of wire width.

Therefore, the stretch roll should be set with better control. In many mills the stretch roll is permitted to rest upon the wire without bearing supports. No control is thus maintained on wire tension. No two wires are run at the same tension. The human equation is permitted to play too great a part in this regard.

The stretch roll is the running tension control. More study should be given this part of the machine. The wire angle between stretch roll and supporting rolls is important in establishing arc of contact to turn these rolls. When we consider that the wire is used to drive all the rolls of the machine, arcs of contact are important.

Guide and Doctor Rolls

Fig. 8 is shown to illustrate the guide and doctor rolls. The arc of contact on the guide roll is important. The greater the angle from the guide roll to the couch, the better the control through the wire guide. Many mills have their guide rolls not properly placed, thus placing a severe load on the wire guide and wire edge. This is also true of the doctor roll. The arc of contact is important in keeping the doctor roll turning at wire speed. If slippage occurs on this roll, stock piles up on the roll, the wire wrinkles and the wire life is affected. Many wires go into a wrinkle at this point and the wire manufacturer is blamed for trouble that is caused in nine cases out of ten by poor machine operation.

As a wire wears, its strength decreases. A worn wire is subject to outside influences more than a new wire. Therefore in many cases, wires go into wrinkles after a partial run, due to stock on the rolls bending the wire, whereas, a new wire is strong enough to overcome these factors.

Improving Operating Conditions

The guide and doctor rolls can be given some study for improving their operating conditions when considered in the light of the above.

Fig. 9 shows the right and wrong manner of setting doctor blades. Every blade is a brake on the machine the wire has to overcome. So, deal with them carefully and keep them properly set.

Consider the first plate. The wire with a wearing life not much greater than a hair is required to drive all the parts of the machine and carry the load of paper and water. A study of machine conditions in the light of the above plates surely will result in better wire life on most machines. The fine wire fabric cannot be made to do the work of a more rugged belt, and at the same time be the perfect mould for the sheet. A closer study of these machine factors will help toward pointing the way for improvements, which will surely pay, in reducing wire cost.

THEORY OF STRETCH ROLL

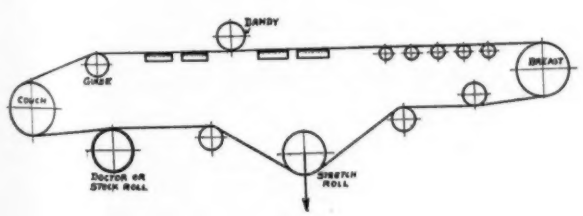


FIG. 8

PLACING OF DOCTOR ON ROLL.

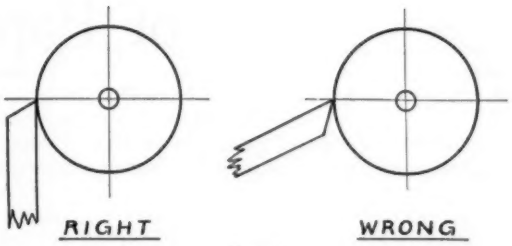


FIG. 9

New TAPPI Members

The executive committee of the Technical Association of the Pulp and Paper Industry has announced that the following have been elected to membership:

Albert Allen, vice president and general manager, Atlantic Precision Instrument Company, Malden, Mass. Mr. Allen attended Harvard University and for seven years was director of the Technical Research Department of the Eastern Manufacturing Company, Bangor, Maine.

I. H. Copeland, manager, Canadian International Paper Company, Three Rivers, P. Q.

Walter T. Cusack, engineer, International Paper Company, Livermore Falls, Maine, is a 1932 graduate of Cornell University.

H. Wyatt Johnston, director, Forest Products Laboratories of Canada, Montreal, P. Q.

James G. Long, chemical engineer, Crown Willamette Paper Company, Camas, Wash., is a 1928 graduate of the University of Washington.

Anton M. Lund, general superintendent, Mazer Paper Company, Lansdowne, Pa., is a 1923 graduate of the Norway University of Technology. He was formerly general superintendent of the Saranac Pulp and Paper Company, Plattsburg, N. Y. and master mechanic of Embretsfos Paper Mills, Aamot, Norway.

Albert W. Luhrs, president, Container Testing Laboratories, Inc. 300 Fourth avenue, New York, is a 1921 graduate of Cooper Union School of Technology. He was formerly engineer for the American Railway Association and was in charge of research and sales promotion for the Paperboard Industries Association, Chicago, and was general manager of the Foreninger Container Laboratoriet, Paris, France.

Robert G. Mispley, chemist, Crown Willamette Paper Company, Camas, Wash., is a 1931 graduate of Oregon State College.

George A. Ritter, paper maker, Island Paper Company, Carthage, N. Y. is a 1926 graduate of Union College. He was formerly chemist for the A. P. W. Paper Company, Albany, N. Y.; Parker-Young Company, Lincoln, N. H.; Foster Paper Company, Utica, N. Y.; superintendent for Lewis, Slocum & Le Fevre Company, Beaver Falls, N. Y.

Hugo H. B. Schapiro, acting technical director, The Ohio Boxboard Company, Rittman, Ohio, and chemical engineer, The Ohio Match Company, Wadsworth, Ohio, is a graduate of the Koenigl. Technische Hockschule, Dresden, Germany, and the Polytechnic Institute of Riga, Latvia.

Ludwig Starck, assistant manager, Wilson Wire Works, Inc., Kearny, N. J. was formerly sales manager for M. A. Irmischer Inc., New York, makers of wire weaving looms.

Hydrogen Ion Concentration (pH) of Paper Extracts*

Apparatus

(1) Grinder: The grinder shall be capable of completely disintegrating the paper without heating or contaminating it. The type described by Burton and Rasch *(1)*, and known as the Koerner type, is recommended.

(2) Glassware: The glassware used shall be resistant to acids and alkalies. Pyrex glass or its equivalent is recommended.

(3) Colorimetric and Electrometric pH Apparatus: Any of the usual forms of colorimetric apparatus employing indicators and glass comparison tubes is suitable. The apparatus recommended for the electrometric determination is illustrated in Fig. 1. In addition to this there is required a potentiometer and galvanometer similar to the Leeds and Northrop student or precision instruments, for measuring the voltage. In the figure, A is a saturated calomel electrode. A platinum wire sealed through the bottom serves to connect the mercury in the tube electrically with that in the outside arm. The electrode is prepared by placing pure mercury in the tube to a depth of about 1 cm., covering this with a 2 mm. layer of calomel (preferably electrolytically prepared), adding pure KCl crystals to a depth of about 1 cm., and filling the tube with a solution of KCl saturated at the temperature at which the electrode is to be used. The funnel C serves as a reservoir for this solution. B is a wide-mouthed test-tube which contains the solution under examination. It is fitted with a stopper bearing a glass tube D which connects this vessel with the calomel electrode. The lower end of D is drawn out as a capillary and bent up as shown, and the entire tube is filled with saturated KCl solution from C. The stopper also contains a narrow glass tube E, which serves as an air vent, and an electrode F. The electrode illustrated may be used as a quinhydrone electrode. In such case, the solution being tested is saturated with quinhydrone by adding approximately 0.5 gram of the solid of as high purity as possible and stirring.

This electrode is the simplest one to use and is satisfactory if the pH of the extract is less than 8, and if the buffer concentration of the extract is not too small. If the pH is greater than 8, some other electrode must be used, such as the hydrogen or antimony electrode. These electrodes, however, do not function well at low buffer concentrations and are "poisoned" by certain materials which may be present in the extract. The most universally useful electrode is the glass electrode which can be used through the entire range of pH up to about pH 11 and which is not sensitive to "poisons." The use of the glass electrode, however, requires an especially sensitive galvanometer *(3) (4) (5)*. It is recommended that the glass electrode be used wherever the equipment is available. In all cases the apparatus used is the same except the electrode F, which must be selected to suit the type of extract being tested.

* This method has been approved by the Paper Testing Committee as a tentative standard testing method of the Technical Association of the Pulp and Paper Industry. Suggestions and criticism should be sent to B. W. Scribner, Bureau of Standards, Washington, D. C.

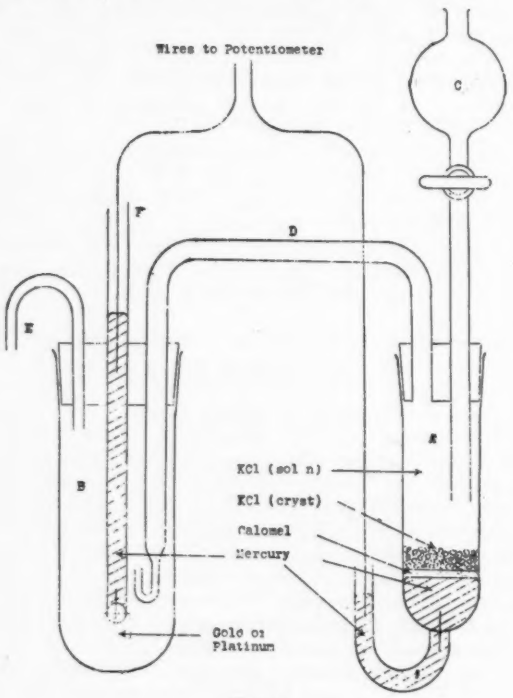


FIG. 1
Electrometric pH Apparatus

Test Specimen

The test specimen shall be cut from the test sample in such a way as to be thoroughly representative of it. It shall be completely disintegrated in the grinder.

Procedure

EXTRACTION

Weigh 5 grams of air-dry paper to the nearest 0.1 gram. For the extraction, transfer the specimen to a 500-cc. flask and add 250-cc. of boiling distilled water. The water should be of high purity, preferably double or triple distilled. The quality of the water is particularly important in the determination of the pH of papers having low acidity, such as unsized papers. In such cases the water should have a pH between 6.6 and 7.0. If the fibers tend to float on the surface of the water, add water in small portions, stir until the fibers are thoroughly wetted, then add the remainder of the water. After the water is added, affix to the flask a stopper containing a glass tube about 8 to 10 mm. in diameter and 75 cm. in length, which serves as a condenser. A soil-digestion flask which has a ground-glass stopper and condensing tube in one piece, or a rubber stopper covered with clean metal foil may be used. Place the flask in a heating bath which will maintain the contents of the flask at 95 to 100 deg. C. without boiling the water. Heat at this temperature for 1 hour with occasional shaking. Pour the contents of the flask on a Büchner funnel without other filtering medium, and draw the solution through the fiber mat with strong suction. Disconnect the suction just before the filtration is completed. As a few fibers may go through the funnel

with the first portion of solution, return the filtrate to the flask and again pass it through the mat. Pour the filtrate into a clean flask, close it tightly with a clean rubber stopper, and set aside to cool to room temperature. The extract must be protected from the air as much as possible at all times to avoid contamination by CO_2.

pH MEASUREMENT

(a) Colorimetric: In using the colorimetric method care must be taken that the indicators are adjusted in pH, either at the midpoint of their range, or at frequent intervals (e.g. 0.2 pH) throughout their usual range for more accurate work. This is necessary because paper extracts are usually not well buffered, and the addition of an indicator may change the pH of the extract sufficiently to cause an appreciable error unless the pH of the indicator is near that of the extract. The Acree-Fawcett isohydric indicator method *(6) (7)* is recommended. This procedure consists of locating the approximate pH of the unknown solution by testing with an indicator solution adjusted at the midpoint of its range and then making a further precision determination with indicator solution adjusted at the approximate pH. This may be most easily accomplished by using solutions of indicator adjusted at intervals of 0.2 pH throughout the effective range of the indicator. The adjustment is made by comparing the color of 0.001 M indicator solution with 0.05 M buffer-color standards while adding to it 0.01 N HCL or NaOH as required to match the color standard having the desired pH. Following is the suggested procedure:

(1) Add 0.2 cc. of midpoint indicator to 10 cc. of extract in a test tube.
(2) Compare with 0.05 M buffer color standards and obtain the approximate pH.
(3) Repeat (1) by using indicator solution adjusted at the approximate pH value obtained in (2).
(4) Compare with color standards and read to nearest 0.1 pH.

This method is simple and convenient, and checks the electrometric method very closely within the limits of its accuracy. The average of the results of at least two determinations shall be reported. The results should agree within 0.2 pH.

(b) Electrometric: Referring to Fig. 1, flush the tube D by opening the stopcock on C momentarily with B removed. Fill the vessel B with the extract to the depth indicated and fit it to the stopper as shown. Run a small amount (about 0.1 cc.) of the saturated KCL_1 solution out through the capillary opening in D. Connect the wires from A and F to a potentiometer and measure the voltage. Take readings until the voltage is constant to about 1 millivolt for a period of several minutes. Calculate the pH from the voltage readings, E, by the following equations:

$$pH = \frac{0.4526 - E}{0.0591} \quad \text{for the quinhydrone electrode.}$$

$$pH = \frac{E - 0.2458}{0.0591} \quad \text{for the hydrogen electrode.}$$

The voltage obtained with the antimony or glass electrode depends upon the individual electrodes used. The pH can be calculated from the voltage by calibrating the electrodes against buffers of known pH. In some cases these calibrations are furnished by the manufacturers of the electrodes. The above equations are for a temperature of 25 deg. C. but they may be used for measurements made at ordinary room temperature within the degree of accuracy stated below, by changing the denominator plus or minus 1/298 of its value, respectively, for each deg. C. above or below 25. These equations are valid only when the saturated calomel electrode is used as the reference electrode. The average of the results of at least two determinations shall be reported. The results should agree within 0.1 pH.

Report

Results shall be reported as the pH of the air-dry paper. They shall be rounded off for the colorimetric method to the nearest 0.1, and for the electrometric method to the nearest 0.05. The report shall state which of these methods was used.

Literature Cited

For an illustrated description of a grinder suitable for disintegrating the paper see:
(1) Burton and Rasch, U. S. Bur. of Standards Jour. of Research, *6*, 605 (Research Paper 295) (1931).
For detailed description of suitable electrometric methods see:
(2) W. M. Clark, "The Determination of Hydrogen Ions," Williams and Wilkens Co., Baltimore (1928).
(3) Burton, Matheson and Acree, U. S. Bur. of Standards Jour. of Research, *12*, 67 (Research Paper 436) (1934).
(4) Leeds and Northrup Company, Philadelphia, Pa.
(5) American Instrument Company, Washington, D. C.
For a description of a suitable colorimetric method see:
(6) Fawcett and Acree, Jour. of Bacteriology, *17*, 171 (1926).
(7) Fawcett and Acree, Ind. Eng. Chem., Anal. Edition, *2*, 78 (1930).
(8) "Modern pH and Chlorine Control," Bulletin of W. A. Taylor and Company, Baltimore, Md.
A study of certain of the details of this method is reported in the following articles:
(9) B. L. Wehmhoff: "The Determination of the pH Values and Total Acidity of Paper," Tech. Assoc. Papers, p. 231, May, 1930; p. 387, May, 1931.

Carborundum on the Air

Announcement is made of the return of the now famed Carborundum programs to the air for the season of 1934-35. These programs are scheduled for Saturday nights 10 to 10:30 o'clock E.S.T., beginning October 20, over a coast-to-coast network of Columbia Broadcasting System stations.

This is the ninth season for Carborundum on the air and once again will be featured the Carborundum band of fifty pieces under the direction of Edward D'Anna, and the telling of the fascinating Indian legends and interesting and instructive industrial stories on the manufacture and uses of the abrasive products of The Carborundum Company. Radio listeners identified with all types of industry will be much interested in these talks as they are planned and told with the least possible amount of usual radio advertising. Rather, they are planned to be at once informative and interesting.

Francis D. Bowman, advertising manager of The Carborundum Company, will continue to write, produce and announce these programs.

Orono Papers To Be Made at Eastern Mills

The Eastern Manufacturing Company has announced that it is planning a re-arrangement and consolidation of its facilities, affecting principally the operation of its Orono Division.

The principal Orono Lines, including Orono watermarked and Embossed papers, Arbro Stripe, Marko Butchers' paper, Arctic Manifold and certain other grades, will be made at the other Eastern Mills and the operation of the Mill at Orono will be discontinued. Additional equipment is being installed at the other mills to take care of the Orono tonnage and to permit more economical and efficient operation.

Neither the manufacturing schedule nor service to customers will be interrupted or in any way affected by the change, except that Orono Division shipments will be made from their other mills instead of from Orono. Sales will continue to be handled, as heretofore, by the General Sales Offices, 500 Fifth avenue, New York City and Western Office, 1223 Conway Building, Chicago, Ill.

Properties of White Braille Papers for Library of Congress Publications*

By C. G. Weber[1]

Abstract

Representative papers used by commercial publishers of books for the blind were studied, and the relationship between quality of the raised dots forming the characters for reading by touch and paper characteristics was determined. The strength of the raised dots was found to be closely related to the tensile properties of the paper. The density of the paper is very important, because of its relation to the reading quality of the dots. Requirements of paper suitable for high-quality braille publications are recommended.

Braille papers were studied for the purpose of assisting the Library of Congress in the purchase of books for the blind. At the time the study was initiated, many types of papers were in use by braille printers and current publications did not all have the quality of printing desired for Library of Congress publications. Since no accurate information on the relation of paper properties to quality of printing was available, the establishment of a quality standard required considerable study of the wide variety of papers in use, and correlation of paper characteristics with quality of printing. Books for the blind require paper with certain properties not essential in the case of papers for ink printing. In addition to sufficient strength to resist wear incidental to handling, this paper must permit the embossing of raised dots that are strong enough to resist deformation under the readers' fingers, and free from surface cracks or other harshness that might be irritating to the sensitive touch of the blind readers.

Description of Braille Process Printing

Braille process printing is a system of printing for the blind in which points or dots, raised above the surface of the paper, form characters which are read by touch. The processes of printing books and magazines for the blind in commercial braille presses are generally classified under the two headings, wet printing and dry printing.

Dry printing, as the name implies, is done on the dry paper, and the resulting dots are generally considered unsuitable for books of permanent value. The use of this process is generally confined to magazines of a temporary nature. Since this class of publications is not purchased by the Library of Congress, papers for dry printing were not included in this study.

In wet-process braille printing, the raised dots forming the characters are formed by embossing wet paper. The paper is prepared for printing by moistening it with water and allowing it to stand in covered piles until the moisture is uniformly distributed. After moistening, the paper is printed on platen presses using embossed plates, and subsequently dried in racks.

Description and Properties of Braille Papers Studied

In order to obtain information on the relation of paper characteristics to the quality of the dots forming the printed characters, both printed and unprinted specimens of the papers used by a number of the leading braille publishers were studied. The papers were somewhat comparable to commercial ledger papers in weight and quality. However, glue or starch surface sizing used extensively on ledger papers is not used on braille papers because the surface sizing causes difficulty in wet process printing. The unprinted papers were tested for weight, thickness, bursting strength, folding endurance, tensile properties, ash, degree of sizing, and fiber composition by standard methods. *(1)* The dots on printed specimens were tested for strength as indicated by resistance to crushing, and they were inspected for surface cracks and other imperfections. The resistance to crushing was determined by measuring, with a dial micrometer, the actual deformation caused by 100 gram deadweight loads on individual dots.

The data for the unprinted and printed papers are given in Table I.

The tensile properties of the paper appeared to be the only strength properties closely related to the strength of the embossed dots. Papers of this type are characterized by a distinct grain, resulting in large directional differences in strength. The tensile breaking strength is much higher in the machine direction than in the cross direction, and the stretch, or elongation at rupture, is higher in the cross direction. The strength of the dots is obviously limited by the minimum values; hence by machine-direction elongation and cross-direction tensile breaking strength.

* Research Paper RP690, Bur. Stds. J. Res. 12 (June, 1934).
[1] Member TAPPI, Asst. Chief, Paper Section, Bureau of Standards, Washington, D. C.

TABLE I.—TEST DATA FOR BRAILLE PAPERS

Sample No.[1]	Weight 25 by 40, 500 Lb.	Thickness In.	Bursting strength Points[2]	Tensile properties[4]: Folding endurance[3]: Machine Double folds[5]	Folding endurance[3]: Cross Double folds	Breaking load: Machine kg.	Breaking load: Cross kg.	Elongation at rupture[4]: Machine Per cent	Elongation at rupture[4]: Cross Per cent	Ash Per cent	Water resistance; dry-indicator method Sec.	Deformation of dots, 10-g load In.	Fibers: Chemical wood: Rag Per cent	Chemical wood: Bleached Per cent	Chemical wood: Unbleached Per cent	Ground wood Per cent	Kraft Per cent
1	95	0.0062	44	14	26	10.1	5.9	2.5	5.5	0.5	52	0.0025	30	70	..	..	..
2	113	.0063	39	43	100	11.4	4.5	2.0	5.5	7.5	39	.0051	5	65	25	5	..
3	96	.0055	37	17	15	9.7	5.1	2.0	4.0	5.0	34	.0044	..	10	70	..	20
4	89	.0063	25	31	17	6.8	3.7	1.5	4.0	10.0	22	.0072	..	100	..	..	..
5	80	.0052	33	17	75	8.0	4.8	1.5	5.0	2.5	33	.0083	..	100	..	..	..
6	85	.0058	37	650	130	9.5	4.7	2.0	4.5	4.5	33	.0047	..	100	..	..	..
7	76	.0048	36	75	65	9.2	4.5	1.5	5.5	.5	43	.0068	..	100	..	..	..
8	82	.0057	36	940	175	8.9	4.6	1.5	3.0	6.5	30	.0080	..	100	..	..	..
9	131	.0070	37	815	730	10.1	7.5	1.5	4.0	4.5	58	.0065	..	10	80	5	5
10	85	.0052	32	285	55	8.0	4.1	2.5	6.0	.5	23	.0056	..	100	..	..	..
11	98	.0064	42	515	270	10.2	6.4	2.0	5.0	5.5	30	.0037	..	15	70	..	15
12	80	.0054	..	2,000	1,000	12.7	6.8	3.0	7.0	...	..	.0055	..	100	..	..	..
13	77	.0054	..	750	1,000	9.9	6.5	2.5	6.5	...	..	.0063	..	100	..	..	..
14	96	.0065	..	550	58	10.8	4.6	2.5	4.5	...	..	.0050	..	100	..	..	..

[1] The sizing material in all samples was rosin only.
[2] Bursting pressure in lb./in.[2] through a circular orifice 1.2 inches in diameter.
[3] For test specimen 15 mm. wide and 90 mm. between jaws.
[4] For test specimens 15 mm. wide and 100 mm. between jaws.
[5] Results expressed to two significant figures.

Elongation is apparently of first importance because dot formation requires considerable paper stretch, and failure to perform satisfactorily in this respect results in cracks which impair not only the strength, but reading quality. Printing made up of dots that were deformed not more than 0.0050 inch under 100-gram load withstood handling extremely well. Hence it appears essential to require tensile properties high enough to ensure dot formation of not over 0.0050 inch. From the data in Table I, it will be observed that this desired dot strength was not obtained in papers having cross direction tensile breaking strength of less than 4.5 kg. or machine direction elongation of less than 2.0 per cent, hence these appeared to be minimum requirements. Machine direction tensile breaking strength and cross direction elongation are important with respect to handling and binding requirements, and minimum values of 9.0 kg. and 4.0 per cent respectively were considered desirable.

Inasmuch as a thickness of 0.0060 inch is regarded by commercial printers as most satisfactory for the average braille press, that thickness was selected as standard. Of the papers that conformed closely to that thickness, those weighing approximately 85 pounds per ream (25 by 40 inches, 500 sheets) apparently had the best dots. Lower weights resulted in dots with poor strength, and higher weights were associated with dots with harsh and broken surfaces. Apparently the density of the paper, that is, the ratio of weight to thickness is important, and weight and thickness must both be closely controlled for satisfactory results in printing.

The validity of these findings was checked by testing additional papers. For this purpose, four papers with like fiber composition and comparable tensile properties, but varying somewhat with respect to ratio of weight to thickness, were selected and studied. These papers were tested for weight, thickness, and tensile properties. Printed specimens were tested for strength of dots, and rated with respect to reading quality of printing by blind readers at the Library of Congress. The results of these tests are given in Table II.

TABLE II

Sample No.	Weight 25 by 40, 500 Lb.	Thickness In.	Tensile properties: Breaking load Machine kg.	Breaking load Cross kg.	Elongation Machine cent	Elongation Cross cent	Deformation of dots under 100-gram load In.	Rating by blind readers
1A	85	0.0057	11.3	4.9	2.5	5.0	0.0043	Good.
2A	90	.0052	11.4	5.7	2.0	6.0	.0058	Poor.
3A	78	.0054	10.3	6.6	2.1	5.6	.0044	Poor.
4A	85	.0058	9.5	4.7	2.0	4.5	.0047	Preferred.

These results emphasize the importance of the proper weight-thickness relationship. All of the papers had satisfactory strength and dots of high resistance to crushing; however, only two of the papers, 4A and 1A, had dots satisfactory from a standpoint of reading quality. These two papers conformed to within a reasonable tolerance of the standard thickness of 0.0060 inch, and each weighed 85 pounds per ream. The other two papers differed somewhat from 4A and 1A as regards weight and thickness, and the dots of printed specimens had inferior reading surfaces. With these results in addition to the data given in Table I as a basis, requirements for a white braille paper suitable for use in the high-quality books for the blind desired by the Library of Congress were recommended.

Requirements for Uniform High Quality Printing

The paper required for wet process braille printing for use in publications for the Library of Congress resembles a sulphite ledger, machine finish without surface sizing. From a consideration of all the results, it appears that a paper of that type, having the properties shown in Table III, will be suitable for durable braille publications of high quality.

TABLE III

Weight 25 by 40, 500 Lb.	Thickness In.	Tensile breaking strength (minimum) Machine kg.	Tensile breaking strength (minimum) Cross kg.	Elongation at rupture (minimum) Machine Per cent	Elongation at rupture (minimum) Cross Per cent	Stock	Color
85 ± 4	0.0060 ±.0005	9.0	4.5	2.0	4.0	Free from ground wood or unbleached wood fibers.	White.

Three of the papers tested met the requirements (see Table III) in all respects, no. 6 in Table I and nos. 1A and 4A in Table II. All of those papers were entirely satisfactory as judged by blind readers. Also, paper conforming to the above requirements has been obtained in commercial quantities by a publishing house for use in the publications for the Library of Congress. This paper moistened and printed well, and the quality of dots printed on different presses by different publishers was in all cases entirely satisfactory to blind readers.

Literature Cited

(1) Paper Testing Methods, Technical Association of the Pulp and Paper Industry, 122 E. 42nd Street, New York, N. Y.

German Paper Production Increases

German paper production during the first six months of the current year was nearly 20 per cent in excess of the output during the corresponding six months in 1933. Newsprint paper, which ranks first in volume, rose from 184,627 metric tons (metric ton = 2,205 pounds) to 202,791 tons, an increase of 10 per cent. Other printing papers and writing papers with a ground wood content, during the same period, rose from 160,091 tons to 193,664 tons. Ordinary wrapping papers decreased from 101,353 tons to 98,332 tons, but this was more than offset by increases in the production of bag papers from 8,700 to 19,088 tons and of straw papers from 40,336 tons to 57,238 tons. Vegetable parchment and greaseproof papers also increased—from 28,032 tons to 36,699 tons. Total paper production during the first six months of the current year amounted to 974,454 tons as against 824,142 tons last year. Not included in these totals are boards of various sorts, the total output of which reached 192,372 tons this year as against 155,948 tons during the first half of 1933. Leading items here are leatherboards, news and chipboards, and strawboards.

Bausch & Lomb Bulletin

As the result of many inquiries, the Bausch & Lomb Optical Company, Rochester, N. Y., has prepared suggested plans for two photomicrographic dark rooms. One of these plans calls for the smallest usable space, 6 x 6 feet, for which any small room or closet, or even the corner of a room, may serve the purpose. The other plan is for an average size dark room, 9 x 12 feet.

These layouts show the suggested arrangement of sink, safelight, shelves for chemicals, plates, films, paper, table, print-washer and drain-boards. Estimated costs for carpentry, painting, plumbing and electrical wiring are made. The customary materials needed for the dark room are listed and their total cost estimated.

The plans are printed on one side of a heavy cardboard poster, 9½ x 13 inches, on the other side of which the rules for using the dark room are printed, with a bold caption, "Knock Before Entering."

Copies of these plans may be obtained on request to the Bausch & Lomb Optical Company, Rochester, N. Y.

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Analytical and Testing Methods

New Installations in the Italian Experimental Station. C. Levi. Industria carta 1, No. 1: 13-24 (Jan., 1934).—A description of the development, installations and equipment, library, publications and aims of the Italian experiment station, is presented. Six illustrations.—C. J. W.

Photomicrographs of Paper Cross Sections. R. Rau. Paper-Ztg. 59, No. 3: 33-34 (Jan. 10, 1934).—Rau presents nine different photomicrograhs of paper cross sections which were taken with the object of determining the difference in the relationship between printing surface and printing ink. Number 1 is a sample of news print where the ink penetrated well into the pores and fibers of the pulp; number 8 represents an aluminum foil with two distinct layers: the ink and foil as the upper dark layer and the cardboard base of the foil as the lower white layer. The pictures of the different degrees of ink absorption in between these two extremes indicate clearly the importance of selecting the correct type of printing ink for each special grade of paper.—C. J. W.

Photomicrographs of Paper Cross Sections. C. W. Leupold. Papier-Ztg. 59, No. 15: 223-224 (Feb. 21, 1934).—A reply to Rau (see above), refuting the statement that the printing ink penetrates into the fiber proper. The black pigment of the ink is deposited on the surface of the paper, while the vehicle or oil varnish is absorbed by the filler, such as kaolin, etc., and penetrates into the interior of the paper mass.—C. J. W.

Arrangement for Determining the Moisture Permeability of Wrapping and Insulating Materials. Ger. pat. 590,516 (Dec. 1, 1931).—J. F. O.

More Concerning the Microscopical Difference Between Sulphate and Sulphite Pulp with the Aid of the Primary and Secondary Fluorescence. Felix Noss and Hans Sadler. Papier-Fabr. 31, No. 31: 413-15 (July 30, 1933).—Samples of bleached and unbleached sulphate and sulphite were colored with various organic dyestuffs and examined under the quartz lamp. It was found that rhodamin 6GD extra gave the best results. A method for the quantitative estimation of an unknown fibrous mixture is worked out and presented in detail.—J. F. O.

The Screen Analysis of Beaten Pulp. K. Dittrich and W. Roos. Papier-Fabr. 31, No. 32: 425-31; No. 33: 439-45 (Aug. 6, 13, 1933).—Pulps are beaten up in a laboratory beater and a ball mill to the same freeness test and the beaten pulp is separated by means of a screen into the various fiber sizes and then test sheets are made to show the properties of the different sizes of fibers. The results clearly shows the type and condition of the beater tackle, whether there has been a cutting action or a crushing action or a combination of both. The "greasy" feel of the fibers is due only to the short fibers and a long "greasy" fiber is not possible. Tests were made with sheets loaded with clay. The use and value of the screen analysis is briefly described.—J. F. O.

Contribution to the Knowledge of the Characteristics of Pulps. V. Hottenroth. Papier-Fabr. 31, No. 43: 557-78 (Oct. 22, 1933).—The results of a year's investigation by the commission for the analysis of the characteristics of pulps are tabulated and discussed. The tests studied are: 1. the determination of the degree of cooking and the lignin content, 2. ash content, 3. alpha cellulose, 4. beta and gamma cellulose, 5. rosin and fat content (alcohol and ether soluble), 6. wood gum and pentosan determination, 7. copper number, 8. viscosity, 9. swelling criterion, 10. strength tests, 11. microscopical and ultra illumination, and 12. characteristics of the stock based on its "hardness" and based on strength tests. Methods for the above tests are recommended.—J. F. O.

The Conception of "Hardness" in Wood Pulps. August Noll. Papier-Fabr. 31, No. 44: 581-87 (Oct. 29, 1933).—The definition of the conception of hardness as the chemical criterion for unbleached pulp and the relations of the hardness of the stock to the degree of cooking are discussed. A hardness scale is made by means of these relations. The relation between the hardness and chlorine consumption as well as between the hardness and the lignin content of sulphite and sulphate pulps are discussed. There is also an apparent and actual hardness with sulphate pulp. In conclusion the author gives his modification of the Johnson method for the hardness. —J. F. O.

Concerning Gloss and the Measuring of Gloss. A. Klughardt. Papier-Fabr. 31, No. 40: 521-24 (Oct. 1, 1933).—The author discusses the theory and operation of several apparatus for the measuring of gloss or finish. —J. F. O.

The Permeability of Paper to Water Vapor. Wilhelm Staedel. Papier-Fabr. 31, No. 41: 535-540: No. 42: 545-49 (Oct. 6, 15, 1933).—The author begins by describing and comparing existing methods for the testing of the permeability of paper to water vapor. After an exhaustive study of the factors influencing the permeability of paper an apparatus is designed which allows 16 tests to be made in 8 hours. The temperature has the greatest influence during the test, as well as the velocity of the air and the difference in moisture content. A comparison of the various conditions of manufacture such as degree of beating, basis weight, fiber content, surface, sizing and filler do not appreciably effect the permeability of the paper to water vapor. A vapor proof paper cannot be made under the usual conditions, there must be a special treatment. In conclusion the author discusses the action taking place when water vapor passes through paper. Numerous charts, drawings and tables as well as a thorough bibliography accompanies the article.—J. F. O.

Application of pH Value to Titrimetric Analysis. A. Nicollet. Papier 37: 55-68 (Jan., 1934).—An explanation of the application of pH values to titrimetric analysis, and more particularly to the analysis of liquors used in pulp manufacture.—A.P.-C.

Colorimetric Determination of the pH of Turbid and Colored Solutions in the Paper Industry. Maurice Deribere. Papeterie 56: 118-125 (Feb. 10, 1934).—A description of the construction and operation of Caillé's ionocolorimeter (Bull. Soc. Chim. Biol. 10: 590-601 [1928]). A.P.-C.

Analysis of Rosin. Anon. Paper Trade J. 98, No. 13: 33-34 (March 29, 1934).—A description of the proposed official standard TAPPI method.—A.P.-C.

Permanganate Number of Pulp. R. H. Wiles. Paper Trade J. 98, No. 11: 34-36 (March 15, 1934).—A detailed description is given of a technic which has been found satisfactory, but the conditions of which must be adhered to strictly in order to obtain good duplication of results.—A.P.-C.

Freeness Indicator and Recorder. George S. Witham, Jr. U. S. pat. 1,945,988 (Feb. 6, 1934).—Part of the stock is flowed through a trough in which is partly immersed a rotor, which is driven by the stock. The speed of rotation of the rotor depends on the consistency of the stock and variations in the speed are used to regulate the amount of water added to the stock ahead of the trough, so as to maintain the consistency constant. Means are also provided to keep the temperature of the stock flowing through the trough constant. This eliminates the necessity of making consistency and temperature corrections in the freeness readings. The rotor is provided with a series of screened openings, and means are provided for measuring, indicating and recording the amount of water passing through the screened openings, which depends on the freeness of the stock.—A.P.-C.

Opacimeter and Method of Measuring Opacity. Myrl N. Davis, assignor to Paper Patents Co. U. S. pat. 1,950,975 (March 13, 1934).—A beam of light is projected on the surface of the sheet of paper whose opacity is to be measured, in such a manner that light is reflected from the surface upon a normally non-illuminated diffusely reflecting surface. The brightness of the light reflected from the latter surface is measured electrically when the test sheet is backed by a white object and when it is backed by a black object, to obtain the ratio of the two intensities.—A.P.-C.

Automatic Gloss Meter. Earl M. Lowry, assignor to Eastman Kodak Co. U. S. pat. 1,917,379 (July 11, 1933).—The instrument comprises a casing close to the sheet but not in contact with it, and mounted so that it can be moved back and forth either automatically or manually across the width of the sheet, preferably as it leaves the calender. The casing is divided into three compartments, one containing an electric lamp (in a ventilated lamp house) and the other two each containing a photoelectric cell, the arrangement being such that one of the cells receives light specularly reflected from the paper, and the other diffusely reflected light. The cells are electrically connected to each other and to a galvanometer, so that the latter indicates the difference between the specular and diffuse reflection, and means may be provided for recording the gloss continuously or intermittently.—A.P.-C.

Effect of Various Methods of Preparing the Disintegrated Pulp Before Beating on the Strength and Other Characteristics After Beating. H. Ainsworth Harrison. Paper Maker & Brit. Paper Trade J. 86: TS175-176 (Sept. 1, 1933).—Data are presented showing that different test results may be obtained depending on the method adopted for concentrating the disintegrated pulp prior to beating in the Lampén mill. It is therefore recommended that during the concentration of all pulps the filtered liquid should be repassed through the mat of pulp till it is quite free from fine fibers.—A.P.-C.

Rapid Methods for the Determination of Bleached and Unbleached Fibers in Pulp and Paper. M. S. Kantrowitz and R. H. Simmons. Paper Trade J. 98, No. 10: 46-48 (March 8, 1934).—The Filz modification (Paper Trade J. 91, No. 16: 49 (Oct. 16, 1930) of the official Bright stain has been further simplified by eliminating two steps in the procedure, and in this form gives results that are fully as accurate as the official Bright test.—A.P.-C.

Bleach Requirements of Pulp. B. C. O. Seborg. Paper Trade J. 98, No. 8: 109 (Feb. 22, 1934).—Description of a method applicable to all types of pulps, which gives results that check on duplicate tests within 1 to 2 per cent of 35 per cent bleach and that differ by not more than 1 to 3 per cent from the actual amount of bleach required in commercial bleaching.—A.P.-C.

Report of the Committee on Physical and Chemical Standards. C. A. Sankey *et al.* Pulp Paper Can. 35: 74-75 (Conv. Issue, 1934).—The committee recommends: (1) adoption as official by the Technical Section of the Can. Pulp & Paper Assoc., of the British pulp evaluation apparatus and method; (2) use of the metric system, insofar as possible, as a common method for expressing test results. APPENDIX A: *Determination of Drainage Factor With the British Sheet Machine.* Ibid 75.—A description of the technic of the determination, based on the work of W. B. Campbell (Pulp Paper Can. 34, 95 [1933]). APPENDIX B. *Recent Developments in Classification of Paper Making Fibers at the Pulp and Paper Division.* G. D. O. Jones and H. Wyatt Johnston. Ibid 76-78.—The previously-described instrument (Pulp Paper Can. 34: 117 [1933]) has been simplified by reducing the number of units employed from 5 to 2. The new arrangement has been shown to be practicable and has been adopted as a standard instrument by the Pulp and Paper Division of the Forest Products Laboratories of Canada. APPENDIX C. *Developments in Standards During 1933.* Ibid. 78-81.—Brief review with bibliography of 112 references.—A.P.-C.

Size Testing of Board. Pierre Drewsen. Paper Ind. 16: 31-32 (April, 1934).—Some empirical tests for estimating the degree of sizing of boards are briefly described. The absence of any satisfactory method of determining degree of sizing of boards is pointed out. The difference between waterproofing and moistureproofing is briefly described.—A.P.-C.

Developments in Paper Testing During 1933. B. W. Scribner. Paper Trade J. 98, No. 13: 39-40 (March 29, 1934).—A brief resume.—A.P.-C.

Sub-Committee Report on Physical Tests on Paper. James d'A. Clark. Paper Trade J. 98, No. 14: 44 (April 5, 1934).—A brief outline of improvements made in the tensile and bursting strength tests.—A.P.-C.

Strength in Wood Pulp Papers. Effect of Beating. H. Ainsworth Harrison. Ind. Eng. Chem. 26:458-461 (April, 1934).—Factors affecting the strength of paper are discussed. It is believed that fibrillation in itself is not of such importance in producing strength as is commonly thought. Evidence in favor of this view is advanced. Experiments are described to show the effect of wetting-out agents on the rate of hydration and strength development.—A.P.-C.

Calculating the Length of Paper in a Roll. D. S. Davis. Paper Ind. 16: 29-30 (April, 1934).—The three most commonly used length formulas are derived and discussed.—A.P.-C.

Comparison of Natural Aging of Paper with Accelerated Aging By Heating. Royal H. Rasch and B. W. Scribner. Bur. Standards J. Research 11, No. 6: 727-732 (1933) (Research Paper No. 620).—Additional evidence favorable to accelerated aging tests is presented. Thirty-three samples are placed in about the same order of stability by accelerated aging as by normal aging.—A.P.-C.

A Sizing Test and a Sizing Theory. R. M. Cobb and Donald V. Lowe. Paper Trade J. 98, No. 12:43-46 (March 22, 1934).—The test consists essentially in deter-

mining the amount of liquid absorbed in a given time. The difference between surface sizing and interior sizing is shown to be due in part to difference in energy release.—A.P.-C.

New Method of Determining Degree of Sizing. Anon. Pulp Paper Can. 35:217 (March, 1934).—The method consists in determining the time required for breaking a test strip under a given load when it is suddenly immersed in water at a definite temperature. A characteristic curve can be obtained by maintaining the water temperature constant, carrying out a series of tests with different loads, and plotting breaking times as abscissas against loads as ordinates. There is a "critical curve" above which fall the curves for all properly sized papers and below which fall the curves for all improperly or insufficiently sized papers.—A.P.-C.

Analysis of Wool in Paper. V. Gruenman. Papier 37:165-170 (Feb., 1934).—A brief review and discussion of methods for the detection and quantitative determination of wool in paper. The Kjeldahl method is considered most suitable for papers containing no textile fibers, and the sulphuric acid solution method for papers containing no highly lignified fibers.—A.P.-C.

Capillary Penetration in Fibrous Materials. R. L. Peek, Jr., and D. A. McLean. Ind. Eng. Chem., Anal. Edit. 6: 85-90 (March 15, 1934).—The authors present a theory for capillary penetration into fibrous material, which is an extension of that developed by Washburn for uniform capillaries. Data presented on the penetration of six organic fluids into strips of filter paper agree with the theory in character.—A.P.-C.

The Copper Number of Cellulose. Brissaud. Mem. Poudres 25:244-286 (1932-33).—Modifying the usual method by using Erlenmeyer flasks almost completely full, in order to avoid oxidation, filtering on a porous plate, passing the filtrate through a filter paper and washing until 0.2 cc. permanganate was not reduced in 2 min., showed that 3-hour tests were satisfactory and that longer tests resulted in the deposition of silica on the fibers. The alkaline copper solution dissolves slightly polymerized products present and reduces them to glucose, which in turn may be decomposed with loss of reducing power, and reduces cupric to cuprous salts. The copper number, the resultant of these reactions, measures the reducing groups present, not pre-existent but formed during the course of the reaction, as well as their speed of solution, this being proportional to the degree of polymerization and amount of surface exposed. For similar celluloses, the results are proportional to the alpha-cellulose present and the results are superior in consistency and reproducibility to the iodine and silver numbers. Results are not comparable for materials which differ in specific surface and degree of polymerization such as cotton linters, regenerated cellulose and chemical wood pulp.—A.P.-C.

The Iodine Number of Cellulose. Brissaud. Mem. Poudres 25:222-243 (1932-1933).—By treatment of cotton linters and wood pulp with iodine in alkaline solution, acidulation and titration with thiosulphate, it was found that the iodine number varies according to whether the iodine or alkali is added first, that there is no relation between iodine number, copper number and percentage of alpha-cellulose and that bleaching in acid solution increases the copper number with slight increase of the iodine number, while in alkaline solution the copper number is slightly increased and the iodine number considerably decreased.—A.P.-C.

Non-Fibrous Raw Materials Committee Annual Report. C. E. Peterson *et al.* Paper Trade J. 98, No. 14:44-48 (April 5, 1934).—A report on the economic trends and technical developments in the field of non-fibrous materials used by the pulp and paper industry, during 1933.—A.P.-C.

Probable Error and Accuracy of Testing. Ragnar Monnberg. Paper Trade J. 98, No. 12: 41-42 (March 22, 1934).—The author presents and briefly discusses the results of error determinations characterizing the accuracy which has prevailed in a commercial laboratory in the determination of: alpha-cellulose, copper number, pitch extraction, ash (all in sulphite pulp), "Mead value" test and Valley beater test.—A.P.-C.

Paper and Other Thin Sheet Materials. Flexibility or Stiffness Tests Using the Flexometer. R. I. Martin and G. R. R. Bray. World's Paper Trade Rev. 100: 2008-2020, 2068 (Dec. 29, 1933); Paper Maker & Brit. Paper Trade J. 87:4, 11-13 (Jan. 1, 1934). Determination of the relative flexibility or stiffness of thin sheet electrical insulating materials by means of the flexometer (F. T. Peirce, J. Textile Inst. 21, T377-416 [1930]) promises to have application to such materials as papers (both untreated and varnished). With many materials the plain rectangular strip specimen curls and kinks, sometimes to such an extent as to make any reading impossible; in such cases, by using a pear-shaped loop specimen much more consistent readings were obtained. The method of making the test and of calculating the results is explained. Difficulties that sometimes arise with even this shape of specimen can be overcome by using a ring-shaped loop; it is held between a pair of blunt knife-edges, a suitable weight is inserted in the loop, and the resultant depression of the bottom of the loop is measured by means of a cathetometer. Calculation of the results from the readings is explained.—A.P.-C.

The Real Meaning of Beta- and Gamma-Cellulose. E. L. Ritman. World's Paper Trade Rev. 100: 968-974 (Sept. 29, 1933).—Analysis of a number of European pulps showed that: (1) beta-cellulose content is a linear function of copper number; (2) chlorine absorption number is a linear function of the sum of lignin and gamma-cellulose. From a discussion of these observations, it is concluded that: (1) beta-cellulose is real cellulose, the micelles being affected in such a way that this form of cellulose is readily dispersed by mercerizing liquor and the ability to reduce Fehling's solution is enhanced; (2) gamma-cellulose contains a constituent which is affected by bleaching; as pure pentosans are not affected by chlorine but are soluble in mercerizing liquor, gamma-cellulose is probably a mixture of pentosans and a chlorine-absorbing constituent.—A.P.-C.

Acidity of Paper. K. Haug. Papir-J. 21 No. 19: 184-187; No. 20:196-198; No. 21:207-209; No. 22:240-242, 244; No. 23:251-254 (Nov. 10, 22, 30; Dec. 14, 20, 1933).—The acidity of paper can be expressed by the pH value of its cold water extract. Heating does not increase the rate of attainment of equilibrium, for equilibrium is established immediately in the cold water extract. The hydrogen ion equilibrium between the two phases of the suspension is also dependent upon other positive ions. This explains why a paper does not show a constant acidity, although the pH value of the back-water is constant. Complete replacement by other positive ions is required for quantitative extraction of the pH ions. The absolute acidity of a paper cannot be determined by the pH value after one extraction with distilled water or a neutral salt solution. A quantitative determination sufficiently accurate for practical purposes can possibly be carried out by extracting with a neutral salt solution of a very high concentration. Tables and charts, showing pH values extracted for different periods of time and with varying fiber concentrations are included in the article.—C.J.W.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

CIGARETTE PAPER

Standard Products Corp., Paris, Havre, 6 cs.; ———, Kosciuszko, Gdynia, 69 cs.

WALL PAPER

———, Kinai Maru, Kobe, 6 bls.

WALL BOARD

Treetex Corp., Argosy, Ornskoldsvik, 1750 bdls.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Farmer, London, 4 bls., 1 cs.

NEWSPRINT

Star Co., Bradesk, Quebec, 4195 rolls; ———, Marthara, Port Alfred, 423 rolls; Hudson Despatch, Marthara, Three Rivers, 214 rolls; Il Progresso Ital. American, Marthara, Three Rivers, 90 rolls; Star Co., Markland, Liverpool, N. S., 333 rolls; N. Y. Tribune, Markland, Liverpool, N. S., 1322 rolls; World Telegram, Markland, Liverpool, N. S., 615 rolls; Brooklyn Daily Eagle, Markland, Liverpool, N. S., 1602 rolls; Bridgeport Herald, Markland, Liverpool, N.S., 31 rolls; South Norwalk Sentinel, Markland, Liverpool, N. S., 66 rolls; Jay Madden Corp., Gen. von Steuben, Bremen, 133 rolls; Mercur Corp., Donnacona 2, Montreal, 578 rolls; Lunham & Reeve, Inc., Scanpenn, Kotka, 186 rolls; Jay Madden Corp., Scanpenn, Kotka, 969 rolls.

PRINTING PAPER

Senefelder Co., Inc., Deutschland, Hamburg, 20 cs.; ———, Scanpenn, Kotka, 236 rolls.

WRAPPING PAPER

———, Volendam, Rotterdam, 61 bls.

PACKING PAPER

American Express Co., Olympia, Genoa, 30 bls.

FILTER MASSE

A. Giese & Son, Deutschland, Hamburg, 5 bls.; ———, Deutschland, Hamburg, 20 bls.

SURFACE COATED PAPER

Globe Shipping Co., Gen. von Steuben, Bremen, 8 cs.; Gevaert Co. of America, Dakotian, Antwerp, 29 cs.; Globe Shipping Co., Deutschland, Hamburg, 2 cs.

METAL COATED PAPER

K. Pauli Co., Gen. von Steuben, Bremen, 3 cs.; K. Pauli Co., Deutschland, Hamburg, 2 cs.

BASIC PAPER

Globe Shipping Co., Gen. von Steuben, Bremen, 12 cs.; Dingelstedt & Co., Europa, Bremen, 9 cs.

TRACING PAPER

C. Bruning, Gen. von Steuben, Bremen, 6 cs.

TRANSFER PAPER

Manhattan Decalcomania Co., Gen. von Steuben, Bremen, 2 cs.; Rohner Gehrig & Co., Europa, Bremen, 2 cs.

DECALCOMANIAS

Sellers Transportation Co., Europa, Bremen, 11 cs.

TISSUE PAPER

Jay Madden Corp., Scanpenn, Kotka, 3 cs., 31 bdls.; ———, Olympic, Southampton, 2 cs.; W. J. Byrnes, Berengaria, Southampton, 1 cs.

PAPER BOARD

Colmar Paper Corp., Dakotian, Antwerp, 15 cs.

MISCELLANEOUS PAPER

Moller Products Corp., Pres. Monroe, Genoa, 25 cs.; Keller Dorian Paper Co., Pres. Monroe, Genoa, 8 cs.; F. C. Strype, Bolendam, Rotterdam, 1 bl.; Corn Exchange Bank Trust Co., Kinai Maru, Osaka, 25 cs.; Irving Trust Co., Kinai Maru, Kobe, 20 pkgs.

RAGS, BAGGINGS, ETC.

Chase National Bank, Black Eagle, Antwerp, 46 bls. cotton waste; W. Steck & Co., Black Eagle, Antwerp, 109 bls. flax waste; G. W. Millar & Co., Black Eagle, Antwerp, 196 bls. flax waste; E. J. Keller Co., Inc., Black Eagle, ———, 245 bls. bagging; Chase National Bank, Gen. von Steuben, Bremen, 36 bls. rags; Jaffe Products Corp., Oriente, Havana, 35 bls. rags; C. H. Powell & Co., Volendam, Rotterdam, 141 bls. cotton waste; ———, American Merchant, London, 92 bls. cotton waste; J. Cohen Son Co., Capulin, Dundee, 46 bls. paper stock; Amtorg Trading Corp., Komsomal, Leningrad, 3313 bls. rags; ———, Cameronia, Glasgow, 25 bls. paper stock; Darmstadt Scott & Courtney, Olympia, Genoa, 59 bls. picker waste.

CASEIN

D. C. Andrews & Co., Deutschland, Hamburg, 50 bags.

WOOD PULP

Price & Pierce, Ltd., Gripsholm, Gothenburg, 360 bls. sulphite; Perkins Goodwin & Co., Gripsholm, Gothenburg, 750 bls. chemical pulp; D. M. Hicks, Inc., Gripsholm, Gothenburg, 150 bls. sulphite; The Borregaard Co., Inc., United States, Oslo, 30 bls. wood pulp, 5 tons; A. Giese

& Son, Volendam, Rotterdam, 50 bls. wood pulp; Lagerloef Trading Co., Scanpenn, Helsingfors, 1158 bls. sulphite, 200 tons; Lagerloef Trading Co., Scanpenn, Wiborg, 1632 bls. sulphite, 305 tons; Castle & Overton, Inc., Scanpenn, Wiborg, 1819 bls. wood pulp, 360 tons; E. J. Keller Co., Inc., Scanpenn, ———, 336 bls. wood pulp, 52 tons; Price & Pierce, Ltd., Argosy, Wallvik, 1800 bls. sulphite, 300 tons; Tradesmans Natl Bank Trust Co., Argosy, Norrsundet, 2500 bls. sulphate, 537 tons: Perkins Goodwin & Co., Argosy, Ornskoldsvik, 1836 bls. chemical pulp, 300 tons; Castle & Overton, Inc., Deutschland, Hamburg, 845 bls. wood pulp, 169 tons; M. Sone, Deutschland, Hamburg, 680 bls. wood pulp, 105 tons; Bank of N. Y. Trust Co., Deutschland, Hamburg, 395 bls. wood pulp, 79 tons.

WOOD PULP BOARDS

Lagerloef Trading Co., Scanpenn, Wiborg, 196 bls., 29 tons.

PORTLAND IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

Gottesman & Co., Inc., Griesheim, Sweden, 1000 bls. wood pulp; Gottesman & Co., Inc., Korsholm, Sweden, 7800 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

Atkinson Haserick & Co., Pres. Monroe, Genoa, 1 cs. wrapping paper; ———, Laconia, Liverpool, 19 bls. rags; G. F. Malcolm Co., Inc., Laconia, Liverpool, 15 cs. tissue paper; G. F. Malcolm Co., Inc., Georgic, Liverpool, 4 cs. tissue paper; Gottesman & Co., Inc., Korsholm, Sweden, 825 bls. wood pulp.

CAMDEN IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

Bulkley Dunton & Co., Carlsholm, ———, 1800 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

Congoleum Nairn Co., Exermont, Marseilles, 115 bls. rags; G. A. Henshaw & Son, Capulin, London, 250 coils old rope; Bulkley Dunton & Co., City of Hamburg, ———, 550 bls. wood pulp; Gottesman & Co., Inc., City of Baltimore, Latvia, 1016 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 1, 1934

Gilman Paper Co., Markland, Liverpool, N. S., 1494 rolls newsprint; A. Bunge, Markland, Liverpool, N. S., 2516 bls. wood pulp screenings; Castle & Overton, Inc., Scanpenn, Helsingfors, 250 bls. mechanical pulp, 50 tons; Lagerloef Trading Co., Scanpenn, Wiborg, 3100 bls. sulphite, 570 tons; Castle & Overton, Inc., Scanpenn, Wiborg, 1696 bls. wood pulp, 338 tons; E. J. Keller Co., Inc., Scanpenn, ———, 337 bls. wood pulp, 52 tons; J. W. Hampton, Jr., Co., Scanpenn, Kotka, 130 rolls newsprint; Jay Madden Corp, Scanpenn, Kotka, 46 bbls., 1 cs. tissue paper; Price & Pierce, Ltd., Argosy, Wallvik, 900 bls. sulphite, 150 tons; Tradesmans Natl Bank Trust Co., Argosy, Norrsundet, 125 bls. sulphate, 26 tons; Johaneson Wales & Sparre, Inc., Argosy, Gdynia, 207 bls. wood pulp, 31 tons; E. J. Keller Co., Inc., Black Hawk, ———, 325 bls. wood pulp; Bulkley Dunton & Co., Carlsholm, ———, 500 bls. wood pulp; Bulkley Dunton & Co., Westerwald, ———, 925 bls. wood pulp; Bulkley Dunton & Co., Topeka, ———, 125 bls. wood pulp.

Writing Paper from Southern Pine

A press dispatch from Memphis, Tenns., says that "In a building on Memphis' Front street a company is working double shifts, ruling and cutting into paper tablets what officials say is the first writing paper to be made from the pine trees of the South.

"John T. Roach, head of the company, said today that he conceived the idea of making paper out of pine pulp after Dr. Charles H. Herty of Savannah, Ga., supplied the idea of making newsprint from native pine trees.

"Roach said that six weeks ago his idea was perfected by friends of his in a paper mill at Hodge, La., and that since that time an order for 240,000 pounds of the new, ink-taking writing paper has been signed by the head of a nationally known firm of chain stores, with headquarters in New York. The contract involves about $18,000. The fourth and last shipment will leave here tomorrow.

"The discovery, Roach says, will mean new industries and thousands of dollars for Tennessee, Mississippi, Alabama, Arkansas, Louisiana and Georgia.

"The erection of a plant in Georgia to manufacture newsprint is contemplated by the Southern Newspaper Publishers Association."

Paper Distributing Hearing Sept. 14

A. H. Chamberlain, executive secretary of the Code Authority of the Paper Distributing Trade, 420 Lexington avenue, New York, announces that NRA has issued a notice of hearing dated August 31, 1934, No. 124A, on the application of the Code Authority of the Paper Distributing Trade for extension to January 31, 1935, of the pricing provisions of the Code for the Paper Distributing Trade—Article VIII, Section 4.

Such hearing will be held at the Hall of Nations, Washington Hotel, Washington, D. C., at 10 A. M., Friday, September 14.

To Reopen Schroon River Plant

WARRENSBURG, N. Y., September 4, 1934.—Albert L. Emerson has announced that the Warrensburg plant of the Schroon River Pulp and Paper Company, idle for three years, will be reopened as soon as equipment can be installed.

The plant normally employs about eighty men and is the largest concern in the village. Mr. Emerson said enough orders had been received already to insure work for a long period.

Defiance Paper Co. Makes Good Report

NIAGARA FALLS, N. Y., September 3, 1934.—The Defiance Paper Company and subsidiaries for the fiscal year ending June 30, 1934 shows a profit of $119,784.63 before Federal income taxes, interest and depreciation, and after a provision for bad debts of $28,400.

The net profit after Federal income taxes, interest and depreciation was $44,751. This compares with a net loss of $37,751.21 for the fiscal year ending June 30, 1933.

Reports Canadian Mills Active

Alexander W. Macvie, who represents Parsons & Whittemore, Inc., New York, has just returned from a two weeks trip through the Provinces of Ontario and Quebec where he visited a number of the mills his principals represent. Mrs. Macvie accompanied him on the trip. He reports that he found his Canadian mills running full.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, September 5, 1934.

While the local paper market is only moderately active at present, trading is expected to become more lively now that the holiday period is drawing to a close. Sales forces of the leading paper organizations are generally optimistic regarding the future trend of business. Prices are holding to schedule.

The position of the newsprint paper market is practically unchanged. Production in the United States, Canada and Newfoundland is being maintained in sufficient volume to take care of current requirements. Advertising lineage in the leading newspapers continues to improve. There is much talk of higher prices around.

Conditions in the fine paper market are fairly satisfactory. Demand is improving slightly. Prices are steady. Tissues are moving in good volume. The coarse paper market is quiet at present, with the future outlook bright. Trading in the paper board market is fairly active. Quotations are well sustained.

Mechanical Pulp

The ground wood pulp market again declined. No. 1 imported moist mechanical pulp is now quoted at from $22 to $24 per ton and dry at from $23 to $24 per ton, on dock, Atlantic ports. No. 1 domestic and Canadian ground wood pulp is still selling at from $22 to $26 per ton, f.o.b. mill.

Chemical Pulp

Demand for both imported and domestic chemical pulp continues restricted. Quotations on bleached sulphite and easy bleaching remain unchanged. Kraft pulp is softer. No. 1 imported kraft pulp is now quoted at from $1.75 to $1.85 per 100 pounds, on dock, Atlantic ports. Domestic kraft pulp is selling at from $1.60 to $2.25, delivered.

Old Rope and Bagging

The old rope market continues quiet. Paper mill demand for both foreign and domestic old manila rope is listless. Small mixed rope is only moving slowly. Old rope prices, however, are unchanged. The bagging market is irregular. Gunny bagging is in persistent request. Scrap bagging is dull. Roofing bagging is fairly steady.

Rags

Several factors have been instrumental in improving sentiment in the domestic rag market, the principal of which is the likelihood of a continuation of the textile strike. Should the labor trouble be protracted it is predicted that quotations on paper making rags will rise. Some improvement has already been noticed in the demand for new cotton rags and old rags.

Waste Paper

The paper stock market is more stable than for some time past. Recently established prices on the lower grades of waste paper are holding up well, although the prevailing demand from the paper mills is rather light. The higher grades of waste paper are steady, especially hard and soft white shavings and hard white envelope cuttings.

Twine

Most of the business transacted in the local twine market during the past week was along routine lines. Supplies are beginning to move into consumption in greater volume, now that the busy season is nigh, and the outlook for the last four months of the year is promising. Prices remain unchanged.

Frank A. Brown Dead

SOUTH HADLEY FALLS, Mass., September 4, 1934.—Frank A. Brown, aged 36 years, assistant treasurer of the Hampshire Paper Company, died August 31, 1934, at his home in Holyoke. Mr. Brown had been employed at the Hampshire Paper Company since 1914, and had won promotion to the post of assistant treasurer. During the war he served in the United States Navy for seventeen months as chief petty officer.

Besides his wife, Mabel (Walsh) Brown, he leaves a five-year-old son, Frank, Jr.; his father, Charles W., of South Hadley Falls; three brothers, Wesley of Williamsett, William of South Hadley and Raymond of New Haven, Conn.; one sister, Mrs. Walter Bauman of South Hadley, and two nephews.

Spaulding Pulp Mill Reopens

SALEM, Ore., September 1, 1934.—The Spaulding Pulp and Paper Company plant in Forest Grove has begun operations again after an enforced lay-off of almost two months, reports from there state. As a result 125 to 130 men will be reemployed. The mill was tied up by the longshore strike as most of the product is shipped to the Orient.

Four shifts are being maintained and will continue in steady operation if shipping conditions permit. As soon as the supply of pulp wood on hand is used additional employment will be provided for truckers and wood workers of a wide area to supply the big plant.

Paper Men Confer in Washington

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 5, 1934.—An informal preliminary conference was held here today in connection with the revised pulp and paper code between Charles W. Boyce, secretary of the American Paper and Pulp Association, other representatives of the paper industry and representatives of the various boards of NRA with Deputy Administrator Tulley. The conference was preliminary to PIA meeting on the same subject next week. It is understood that good progress was made at the conference.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, September 5, 1934.

BLANC FIXE.—Steadiness prevails in the blanc fixe market. The contract movement is well up to average. The pulp is still quoted at from $42.50 to $45 per ton, in bulk; while the powder is selling at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is displaying a fairly strong undertone. Contract shipments are moving in good volume for the season. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market is steady to firm. Domestic standard ground is quoted at 12¼ cents and finely ground at 12¾ cents per pound, in bags, car lot quantities. Offerings of Argentine standard ground and finely ground are scarce and prices nominal.

CAUSTIC SODA.—With the holidays drawing to a close the caustic soda market is expected to become more active. Solid caustic soda is quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in large drums, at works.

CHINA CLAY.—The china clay market is fairly active. Contract shipments are going forward at a steady pace. Imported china clay is quoted at from $13.50 to $21 per ton, ship side; while domestic paper making clay is selling at from $5 to $12 per ton, at works.

CHLORINE.—Some improvement transpired in the chlorine market. The contract movement is fairly heavy. Prices remain unchanged. Chlorine is quoted at from $2 to $2.25 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market continues firm. Paper making gum rosin is quoted at from $5.50 to $5.60 per 280 pounds, in barrels, at works; wood rosin at $4.30 per 280 pounds, in barrels, and rosin wax size at 5 cents per pound, from shipping points.

SALT CAKE.—Demand for salt cake is fairly persistent. Prices are holding to schedule. Salt cake is quoted at from $12 to $14, and chrome salt cake at from $12 to $12.50 per ton, at works. Imported salt cake is quoted at from $12 to $12.50 per ton, on dock.

SODA ASH.—The soda market is exhibiting a stronger trend. Shipments against contract are moving in better volume. Quotations on soda ash, in car lots, at works, per 100 pounds, are still as follows: in bulk, $1.10; in bags, $1.40; and in barrels, $1.50.

STARCH.—Influenced by the strength of the basic product, the starch market continues steady to firm. Prices are well maintained. Special paper making starch is quoted at $3.57 per 100 pounds, in bags; and at $3.84 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Conditions in the sulphate of alumina market are satisfactory. The contract movement is more active. Commercial grades are quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market is steady. Sulphur is quoted at $18 per long ton on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—No radical changes were reported in the talc market. The contract movement is normal for the season. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	4.00	@	4.50
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.50	@	3.50
Glassine—			
Bleached	.11	@	—
Unbleached	.09	@	—

(The following Quotations are Delivered New York)

News, per ton—			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Kraft—			
No. 1 Domestic	4.75	@	5.00
No. 2 Domestic	3.87½	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	40.00	@	45.00
Chip	37.50	@	40.00
Sgl. Mla. Ll. Chip	52.50	@	57.50
Jute Lined Chip	47.50	@	52.00
White Patent Coated	60.00	@	65.00
Binders Boards	67.00	@	75.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	22.00	@	24.00
Dry	23.00	@	24.00

(F.o.b. Mill)

No. 1 Domestic and Canadian	22.00	@	26.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.85	@	—*
Division 2	2.80	@	—*
Division 3	2.75	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.25	@	—*
Other Than Easy Bleaching—			
Class 2. Higher Than Standard	2.20	@	—*
Class 3. Standard	2.15	@	—*
Class 4. Lower than Standard	2.10	@	—

(On Dock, Atlantic Ports)

Kraft No. 1	1.75	@	1.85
Kraft No. 2	1.60	@	1.70

(F.o.b. Pulp Mill)

Kraft Domestic	1.60	@	2.25

(Delivered)

Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	5.75	@	6.00
Silesias No. 1	3.75	@	4.00
New Unbleached	6.25	@	6.50
New Soft Blacks	3.00	@	3.25
Blue Overall	3.50	@	3.75
Fancy	2.50	@	2.75
Washables	1 75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.10	@	1.25
No. 2	.80	@	.85
No. 3	.70	@	.75
No. 4	.65	@	.70
No. 5A	.60	@	.65

Foreign Rags

New Rags

New Dark Cuttings	1.60	@	1.70
New Mixed Cuttings	1.75	@	1.85
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.40	@	1.60
Dark Cottons	1.00	@	1.10
Old Shopperies	.95	@	1.00
New Shopperies	.90	@	1.00
French Blues	1.70	@	1.80

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	1.40	@	1.50
Wool Tares, light	1.20	@	1.30
Wool Tares, heavy	1.20	@	1.30
Bright Bagging	1.15	@	1.25
Manila Rope—			
Foreign	2.35	@	2.45
Domestic	2.25	@	2.50
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	2 75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.70	@	2.80
Ordinary Hard White No. 1	2.15	@	2.25
Hard White No. 2	1.95	@	2.05
Soft White No. 1	1.85	@	1.95
Flat Stock—			
Stitchless	.80	@	.90
Over issue Mag.	.80	@	.90
Solid Flat Book	.65	@	.75
Crumpled No. 1	.60	@	.65
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.00	@	1.10
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Machine—			
Compressed bales	1.10	@	1.20
News—			
No. 1 White News	1.15	@	1.25
Strictly Overissue	.65	@	.70
Strictly Folded	.42½	@	.50
No. 1 Mixed Paper	.32½	@	.40

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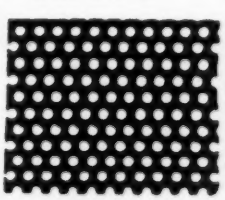

".065" Round

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63-65 FAIRMONT AVE. JERSEY CITY, N. J.

Twines

(F. o. b. Mill)

Cotton—			
B. C. 18 basis	.30	@	.32
No. 1	.20	@	.22
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Flaxseed Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15½	@	.16½
No. 2	.15	@	.16
Tube Rope—			
4-ply and larger	.09¼	@	.09¾
Fine Tube Rope—			
4-ply	.11¾	@	.11¾
3-ply	.14¼	@	.14¾
2-ply	.14¼	@	.14¾
Paper Makers Twine	.08¼	@	.13¼
Box Twine, 2-3 ply	.14¼	@	.14¾
White Hemp	.13¼	@	.16¾
Java Sisal—			
No. 1 Basis	.11½	@	—
No. 2 Basis	.10½	@	—
New Zealand Sisal	.11½	@	—
Sisal Lath Yarn—			
No. 1	.13½	@	.15½
No. 2	.11½	@	.13½
Manila Twine	.24½	@	.29½

CHICAGO

Paper

(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06¼	@	.11
Sulphite Bond	.05½	@	.11
Superfine Writing	.18	@	.24
No 1 M. F. Book	.06½	@	.07¾
No 2 M. F. Book	.05¾	@	.06¾
No 1 S.&S.C. Book	.06¼	@	.07¾
No 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¾	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¾	@	.04¾
Butcher's Manila	.03¾	@	.03¾
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.05¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News, per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	51.00
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent coated	65.00	@	—

Container Lined—

85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.50	@	.55
Overissue News	.60	@	.70
Old Newspapers—			
No. 1	.50	@	.55
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(Delivered Philadelphia)

Bonds	.05-9/10	@	.38
Ledgers	.06 9/10	@	.40
Writings—			
Fine No. 3	.05	@	.06
Superfine	.10	@	.18
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Book, M. F.	.05¾	@	.06¼
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06½	@	.09
Coated Lithograph	.06¾	@	.08½
Label	.07	@	.11
No. 1 Jute Manila	6.25	@	—
Manila Sul., No. 1	5.25	@	—
Manila No. 2	3.00	@	—
No. 1 Kraft	5.00	@	—
Southern Kraft	4.75	@	—
Common Bogus	.03	@	.04½
News Print Rolls	46.00	@	55.00
Straw Board	40.00	@	45.00
News Board	50.00	@	—
Chip Board	45.00	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.65
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03¾
Black Silesias, soft	.02½	@	.03
New Unbleached	.05	@	.05¾
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01¾	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	1.90	@	2.00
No. 1 Soft White	1.80	@	1.85
No. 2 Soft White	1.25	@	1.50
No. 1 Mixed	—	@	.75
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.10	@	1.20
No. 1 Books, heavy	—	@	.70
No. 1 New Manila	—	@	1.40
Print Manila	—	@	.60
Container Manila	—	@	.50
Old Kraft	1.00	@	1.10
No. 1 Mixed Paper	—	@	.32½
Straw Board Chip	—	@	.30
Binders Board Chip	—	@	.30
Corrugated Board	—	@	.50
Overissue News	—	@	.50
Old Newspapers	—	@	.42½

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.07¼	@	.11
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¼	@	.06½
Manila, Sul. No. 2	.03¼	@	.04½
No. 1 Kraft	.04¼	@	.05
No. 2 Kraft	.03½	@	.04¼
(F. o. b. Boston)			
Southern Kraft	.03½	@	.04½

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

Common Bogus	.02	@	.02¼
(Delivered New England points)			
News Print, rolls	44.50	@	—
Straw Board, rolls	.009	—	@35.00
Straw Board in Sheets, basis 35s to 70s	—	@40.00	
Filled News Board	40.00	@45.00	
Chip Board	37.50	@40.00	
Chip Board (Creasing)	37.50	@40.00	
Single Manila Lined Chip	47.50	@52.50	
Single White, Patent Coated News Board (Bender)	57.50	@65.00	
Wood Pulp Board	70.00	@75.00	
Binder Boards (Standard Grade)	67.00	@75.00	

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	$2.20	@	2.35
No. 1 Soft White	1.75	@	2.00
No. 2 Mixed	.80	@	.85
Solid Ledger Books	1.75	@	—
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.95	@	1.05
No. 1 Books, heavy	.85	@	.90
No. 1 Books, light	.65	@	.75
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.75	@	.80
White Blank News	1.05	@	1.15
No. 1 Kraft	1.05	@	1.10
Manila	.70	@	.75
No. 1 Mixed Papers	.35	@	—
Print Manila	.45	@	.50
Overissue News	.50	@	.55
Old Newspapers	.42½	@	.45
Box Board Chips	.32½	@	.35
Corrugated Boxes	.40	@	.45
Screening Wrappers	.50	@	.60

Bagging

(F. o. b. Boston)

Manila Rope—			
Foreign	1.90	@	2.00
Domestic	2.00	@	2.20
Transmission Rope	—	@	1.25
Mixed Strings	—	@	.30
Jute Rope	1.50	@	1.60
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	...	@	1.50
Bleachery Burlap	3.00	@	3.25
Scrap Burlap	1.15	@	1.20
Scrap Sisal	1.10	@	1.20
Scrap Sisal for shredding	1.00	@	1.25
Wool Tares, heavy	1.25	@	1.30
New Burlap Cuttings	1.75	@	1.85
Australian Wool Pouches	2.25	@	2.50
Heavy Baling Bagging	1.40	@	1.50
Paper Mill Bagging	.90	@	1.10
Bagging No. 2	.50	@	.55

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.01¾	@	.02
New White No. 1.	.05½	@	.06
New White No. 2.	.03½	@	.04
Silesias No. 1	.04	@	—
New Black Silesias	.02½	@	.03
New Unbleached	.05½	@	.06
Blue Cheviot	—	@	4.65
Fancy	—	@	.02½
Washable	.02¼	@	—
Cottons—According to grades—			
Blue Overalls	—	@	.03¼
New Black. suit	04	@	.04½
Khaki Cuttings	.03	@	.03¼
O. D. Khaki	.02¾	@	.03
Corduroy	.01¾	@	.02
New Canvas	—	@	05
B.V.D. Cuttings	—	@	.06¼

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	[illegible]	@	
White No. 1—			
Repacked	—	@	3.00
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Twos and Blues	1.25	@	1.50
Thirds and Blues			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Black Stockings	2.25	@	2.50
Roofing Stock			
No. 1	.80	@	.85
No. 2	.65	@	.70
No. 3	.55	@	.60

Foreign Rags

(F. o. b. Boston)

Dark Cottons	.85	@	.95
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.55	@	1.60
Old Linsey Garments	1.25	@	1.35

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.10¼	@	—
No. 2 Sulphite	.08½	@	—
No. 1 Colored	.10¼	@	—
No. 2 Colored	.09	@	.10
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	6.65	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.22½	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp

(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	50.00	@	55.00
Sulphate	50.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.00	@	2.30
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.50
Printed Manilas	.70	@	.60
Kraft	1.25	@	1.50
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.60	@	—
No. 1 Mixed Paper	.50	@	—

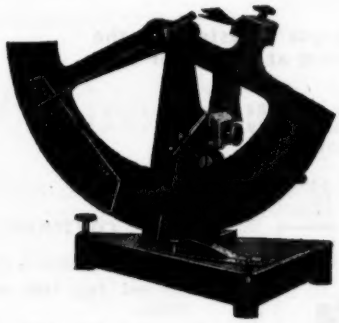
Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06	@	.06¼
Fancy Shirt Cuttings	.02¼	@	.02½

Elmendorf

The Standard Tearing Strength Test



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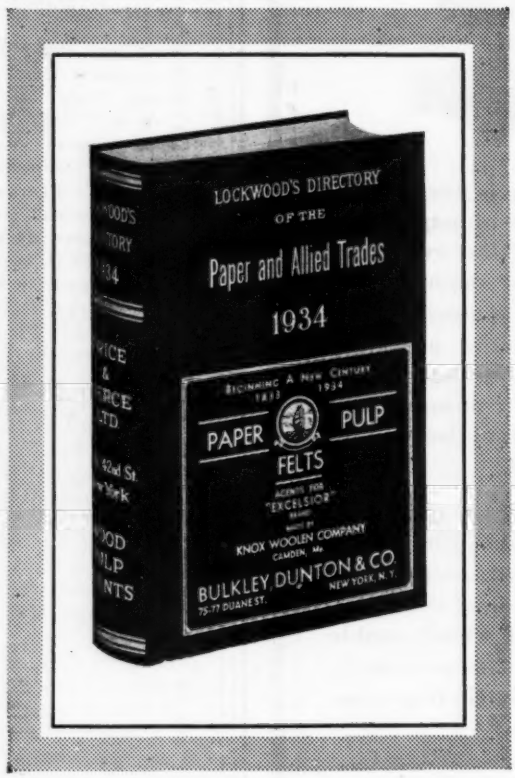

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